

REV : 01  
JULY 21, 1998

---

**AC SERIES**

---

**SERVICE MANUAL**

**C A S CORPORATION**

## THE CONTENTS

### CHAPTER-I THE GENERAL INTRODUCTIONS

|                                |   |
|--------------------------------|---|
| A.... PREFACE .....            | 3 |
| B.... THE PRECAUTIONS .....    | 3 |
| C.... THE SPECIFICATIONS ..... | 3 |
| D.... SEALING METHOD .....     | 4 |

### CHAPTER-II THE CALIBRATIONS

|  |   |
|--|---|
| A.... GENERAL SPAN CALIBRATION .....                       | 5 |
| A.1.. SET TO THE CALIBRATION MODE .....                    | 5 |
| A.2.. THE SPAN CALIBRATION .....                           | 5 |
| A.3.. TO CHECK THE INITIAL ZERO POINT AND SPAN VALUE ..... | 6 |
| A.4.. TO CONFIRM THE SPAN AND TO DO FINE TRIMMING .....    | 6 |
| A.5.. RETURN TO THE NORMAL MODE .....                      | 6 |

### CHAPTER-III THE PART REPLACEMENTS

|   |   |
|---|---|
| A.... REPLACEMENT OF THE LOAD CELL .....      | 7 |
| A.1.. REPLACEMENT OF THE LOAD CELL .....      | 7 |
| A.2.. CORRECTION OF THE ECCENTRICITY .....    | 7 |
| A.3.. THE SPAN CALIBRATION .....              | 7 |
| B.... REPLACEMENT OF THE ANALOG MODULE .....  | 8 |
| B.1.. REPLACEMENT OF THE ANALOG MODULE .....  | 8 |
| C.... REPLACEMENT OF THE DIGITAL MODULE ..... | 8 |
| C.1.. REPLACEMENT OF THE DIGITAL MODULE ..... | 8 |
| D.... REPLACEMENT OF THE KEYBOARD .....       | 8 |
| D.1.. REPLACEMENT OF THE KEYBOARD .....       | 8 |
| D.2.. TEST THE KEYBOARD .....                 | 8 |
| D.3.. RETURN TO THE NORMAL MODE .....         | 8 |

### CHAPTER-IV THE TRANSFORMER

|                             |   |
|-----------------------------|---|
| A.... THE TRANSFORMER ..... | 9 |
|-----------------------------|---|

### CHAPTER-V THE SCHEMATICS

|                                     |    |
|-------------------------------------|----|
| A.... MAIN CIRCUIT DIAGRAM .....    | 10 |
| B.... DISPLAY CIRCUIT DIAGRAM ..... | 11 |
| C.... DIGITAL MODULE DIAGRAM .....  | 12 |
| D.... ANALOG MODULE DIAGRAM .....   | 13 |
| E.... WIRING DIAGRAM .....          | 14 |
| F.... PARTS LOCATION .....          | 16 |

### CHAPTER-VI THE OTHERS

|  |    |
|--|----|
| A.... FOR THE SERIAL INTERFACE .....     | 19 |
| A.1.. THE COMMUNICATION AGREEMENTS ..... | 19 |
| A.2.. THE WIRE CONNECTIONS .....         | 19 |
| A.3.. THE PROTOCOL .....                 | 20 |
| A.4.. THE DATA TRAINS .....              | 20 |
| B.... EXPLODED VIEW .....                | 22 |
| C.... FULL PARTS LIST .....              | 24 |

|                                       |    |
|---------------------------------------|----|
| APPENDIX - DEVICE SPECIFICATION ..... | 34 |
|---------------------------------------|----|

=====

## CHAPTER-I

### THE GENERAL INTRODUCTIONS

=====

#### A. PREFACE

Thank you for the purchasing of CAS AC Series.  
These series have been designed with CAS reliability, under rigid quality control and with outstanding performance. Your departments can enjoy with these high quality reliable CAS products.  
We believe that your needs will be satisfied and you will have reliability with in variable weight.  
This manual will help you with proper operations and care of the AC series.  
Please keep it handy for the future references.

#### B. THE PRECAUTIONS

1. Make sure that you plug your scale into the proper power outlet.
2. Place the scale on a flat and stable surface.
3. Plug into a power outlet 30 minutes before operations.
4. Keep the scale away from strong EMI noises may cause incorrect weight readings.
5. This scale must be installed in a dry and liquid free environment.
6. Do not subject the scale to sudden temperature changes.
7. Do not subject the platter to sudden shocks.
8. If the scale is not properly level, please adjust the 4 legs at the bottom of the scale (turn legs clockwise or counterclockwise) so as to center the bubble of the levelling gauge inside the indicated circle.

#### C. THE SPECIFICATIONS

| MODEL               | AC (25AC/50AC/100AC) |
|---------------------|----------------------|
| INTERNAL RESOLUTION | 1/25,000             |
| DISPLAY RESOLUTION  | 1/5,000              |
| FUNCTION            | COUNTING             |
| DISPLAY DIGIT       | 5/5/5                |
| MEASUREMENT TYPE    | LOAD CELL TYPE       |
| POWER SUPPLY        | AC 220V/60Hz         |
| POWER CONSUMPTION   | APPROX. 10W          |
| TEMPERATURE         | -5℃ ~ +35℃           |

Notice : Specifications are subject to change for improvement without notice.

# C. SEALING METHOD

REV : 00

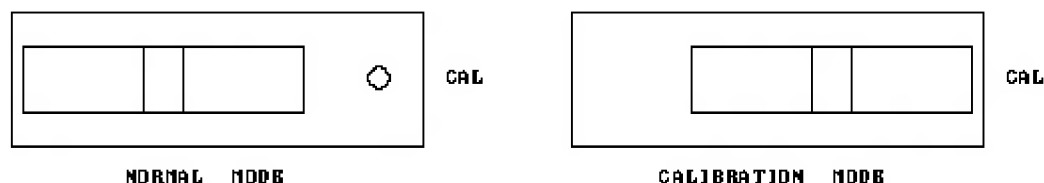
| REV                                   | SYM               | CONTENTS                |         |                |  | DRAWN  | CHECKED          | APPROVED                   |
|---------------------------------------|-------------------|-------------------------|---------|----------------|--|--|------------------|----------------------------|
| A                                     |                   |                         |         |                |  |  |                  |                            |
| B                                     |                   |                         |         |                |  |  |                  |                            |
| C                                     |                   |                         |         |                |  |  |                  |                            |
| D                                     |                   |                         |         |                |  |  |                  |                            |
| NO                                    |                   | PARTS NAME              |         | SPECIFICATION  |  | Q'TY   |                  | REMARK                     |
| TOLERANCES UNLESS OTHERWISE SPECIFIED |                   | NAME OR TITLE           |         |                |  | <b>CAS</b><br>CAS CORPORATION<br>#19 KANAP-RI KWANGJEOK-MYON<br>YANGJU-KUN KYUNGKI-DO, KOREA |                  |                            |
| ANGULAR $\pm$ N/A                     |                   | SEALING METHOD          |         |                |  |  |                  |                            |
| E                                     | DECIMAL $\pm$ N/A | FIRST USED IN ASSEMBLY  |         |                |  | COUNTING SCALE   |                  |                            |
|                                       |                   | Q'TY/SET                |         | FIRST MADE FOR |  | END FINISH   |                  |                            |
|                                       |                   | 1/1                     |         | AC             |  | N/A  |                  |                            |
|                                       |                   | CONTRACT OR CUSTOMER NO |         | WORLD WIDE     |  | DO NOT SCALE DRAWING   |                  | DIMENSIONS ARE IN MM. INCH |
| DRAWN                                 |                   | CHECKED                 | CHECKED | APPROVED       |  | SCALE  | DRAWING.PART NO. | REV                        |
| Haw                                   |                   |                         | 26/4    | ms             |  | F/S  | 3005-AC0-0000    | 00                         |
| .19                                   |                   | .19                     | .19     | .19            |  |  |                  |                            |

# CHAPTER-II

## THE CALIBRATIONS

### A. THE GENERAL SPAN CALIBRATION

#### A. 1 SET TO THE CALIBRATION MODE



1. Remove the CAL switch cover and set the calibration switch to the right as shown in above.
2. Turn on the power switch. "CAL" will be flickered three times and then be blanked.

#### A. 2 THE SPAN CALIBRATION

Press C and 4 key, then "C set" would be displayed in the weight display as below. After this, begin entering refer to the TABLE 1.

|       |                     |
|-------|---------------------|
| XX    | -- condition factor |
| C Set |                     |
| 1     | -- step number      |

Press C key to go to next step.

When you finish these steps, the display shows "End" message.

< TABLE 1. >

| C + 4 key | 25AC | 50AC | 100AC |
|-----------|------|------|-------|
| STEP 1    | 00   | 00   | 00    |
| STEP 2    | 02   | 04   | 08    |
| STEP 3    | 00   | 00   | 00    |
| STEP 4    | 00   | 00   | 00    |

1. Empty the tray then press C and 3 key.  
"ULdAd" is displayed in the weight display and if "C" key is pressed, "Stable" will be displayed first and then perform count down itself 8 through 0.
2. Then "LDAd" will be displayed.  
Now, load full weight and press C key again. After counting down, "End" message will be displayed and it will be off.

## **A. 3 TO CHECK THE INITIAL ZERO POINT AND SPAN VALUE**

1. Place the tray and read the zero point by pressing **C** and **5** key.
2. It is normal when the value is within 0 through 50,000 on the count display.
3. Make the weight display to "0" by pressing **ZERO** key and load full weight.
4. It is normal when the reading is higher than 50,000 but the value exceed the "100,000", the display shows 5 digits. For example, 110,000 is displayed as 10,000.

## **A. 4 TO CONFIRM THE SPAN AND TO DO FINE TRIMMING**

1. When the fine span trimming is needed, remove the weight from the tray and press **C** and **1** key and then load full weight.  
When you load full weight, the value should be 25,000.  
If you have to increase the value, press **7** and **0** key, and if you have to decrease the value, press the **7** key two times.

## **A. 5 RETURN TO THE NORMAL MODE**

1. Empty the tray and press **C** and **0** key.  
Now, this scale return to normal mode.
2. Return the CAL switch to normal position(initial position.)

---

## CHAPTER-III

### THE PART REPLACEMENTS

---

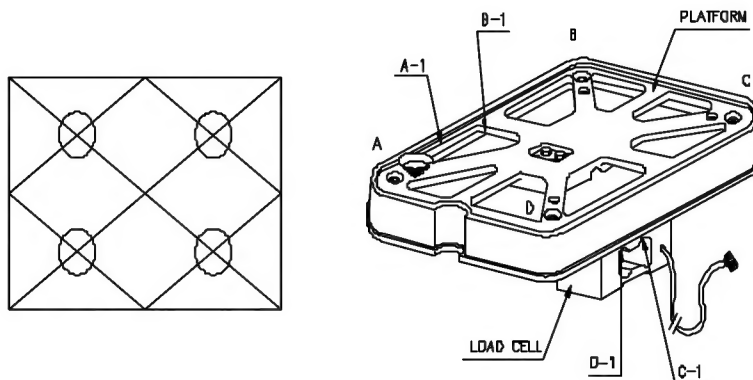
#### A. REPLACEMENT OF THE LOAD CELL

##### A. 1 REPLACEMENT OF THE LOAD CELL

- A.1.1 Remove the platter and disassemble the upper case.
- A.1.2 Remove the platform on the load cell with a hex wrench.
- A.1.3 Disconnect a connector wire of the load cell from the PCB.
- A.1.4 Remove the load cell from the body.
- A.1.5 Replace the load cell by a new one.
- A.1.6 Connect a connector wire of the load cell to the PCB.
- A.1.7 Place the platform on the load cell.

##### A. 2 CORRECTION OF THE ECCENTRICITY

- A.2.1 Set a calibration mode.
- A.2.2 Press the "C" and "5" key.
- A.2.3 Rerzero the weight display by pressing "ZERD" key, if it is needed.
- A.2.4 Place 1/3 the scale capacity on the platform by turns as shown in belows.



- A.2.5 Compare four values which are output from load cell.  
Maximum value is regarded as a base and grind the point in load cell where shows less than other value.  
And check each point is within  $\pm 1$  count tolerance with 1/3 of full load.

##### A. 3 THE SPAN CALIBRATION

Refer to the Chapter 11.

## B. REPLACEMENT OF THE ANALOG MODULE

### B. 1 REPLACEMENT OF THE ANALOG MODULE

- B.1.1 Remove the platter and the upper case.
- B.1.2 Take a main circuit board out on the body.
- B.1.3 Desolder the analog module pins(11 pins) on main board.
- B.1.4 Replace the analog module (CAM 01) by a new one.
- B.1.5 Install the main board on the body.
- B.1.6 Place the upper case and the platter.

NOTE : After replacement of the analog module, you must do the calibration again.

## C. REPLACEMENT OF THE DIGITAL MODULE

### C. 1 REPLACEMENT OF THE DIGITAL MODULE

- C.1.1 Remove the platter and the upper case.
- C.1.2 Take a main circuit board out on the body.
- C.1.3 Desolder the digital module pins(48 pins) on main board.
- C.1.4 Replace the digital module by a new one.
- C.1.5 Install the main board on the body.
- C.1.6 Place the upper case and the platter.

NOTE : After replacement of the digital module, you must do the calibration again.

## D. REPLACEMENT OF THE KEYBOARD

### D. 1 REPLACEMENT OF THE KEYBOARD

- D.1.1 Remove the upper case.
- D.1.2 Disconnect a tail of the keyboard.
- D.1.3 Replace the keyboard by a new one.
- D.1.4 Connect a tail of the key board into connectors **CMS** on the PCB.

NOTE : After replacement of the keyboard, you must do the calibration again.

### D. 2 TEST THE KEY BOARD

- D.2.1 Set a calibration mode.
- D.2.2 Press the "C" and "2" key.
- D.2.3 Press each key.
- D.2.4 The count display will show the matrix key code of the key.  
(Refer to TABLE 2)

<TABLE 2>

| KEY    | MATRIX KEY CODE |
|--------|-----------------|
| .      | f               |
| TARE   | b               |
| ZERO   | c               |
| NUM    | d               |
| HGT    | e               |
| ON/OFF | 1b              |

### D. 3 RETURN TO THE NORMAL MODE

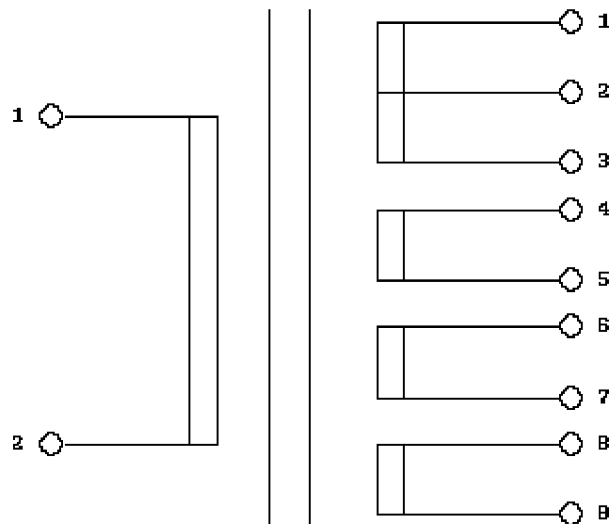
- 1) Set the CAL switch to the normal mode.
- 2) Press "C" and "0" key.



# CHAPTER-IV

## THE TRANSFORMER

### A. THE TRANSFORMER



| QUALITY OF LEAD WIRE AND LENGTH |     |        |             |                |     |      |
|---------------------------------|-----|--------|-------------|----------------|-----|------|
|                                 | NO. | COLOR  | WIRE LENGTH | TREATMENT (mm) | nA  | V    |
| INPUT                           | 1   | WHITE  | 150 mm      | ± 10           |     | 0    |
|                                 | 2   | RED    | "           | "              |     | 220  |
| OUTPUT                          | 1   | GRAY   | 300 mm      | "              | 700 | 1.65 |
|                                 | 2   | PURPLE | "           | "              | 0   | 0    |
|                                 | 3   | BLUE   | "           | "              | 700 | 1.65 |
|                                 | 4   | BROWN  | "           | "              | 50  | 20   |
|                                 | 5   | BLACK  | "           | "              |     |      |
|                                 | 6   | YELLOW | "           | "              | 100 | 16.5 |
|                                 | 7   | GREEN  | "           | "              |     |      |
|                                 | 8   | ORANGE | "           | "              | 100 | 8.8  |
|                                 | 9   | RED    | "           | "              |     |      |

21: CORE : 48 X 25 mm  
 21: 50Hz / 60Hz

---

## CHAPTER-V

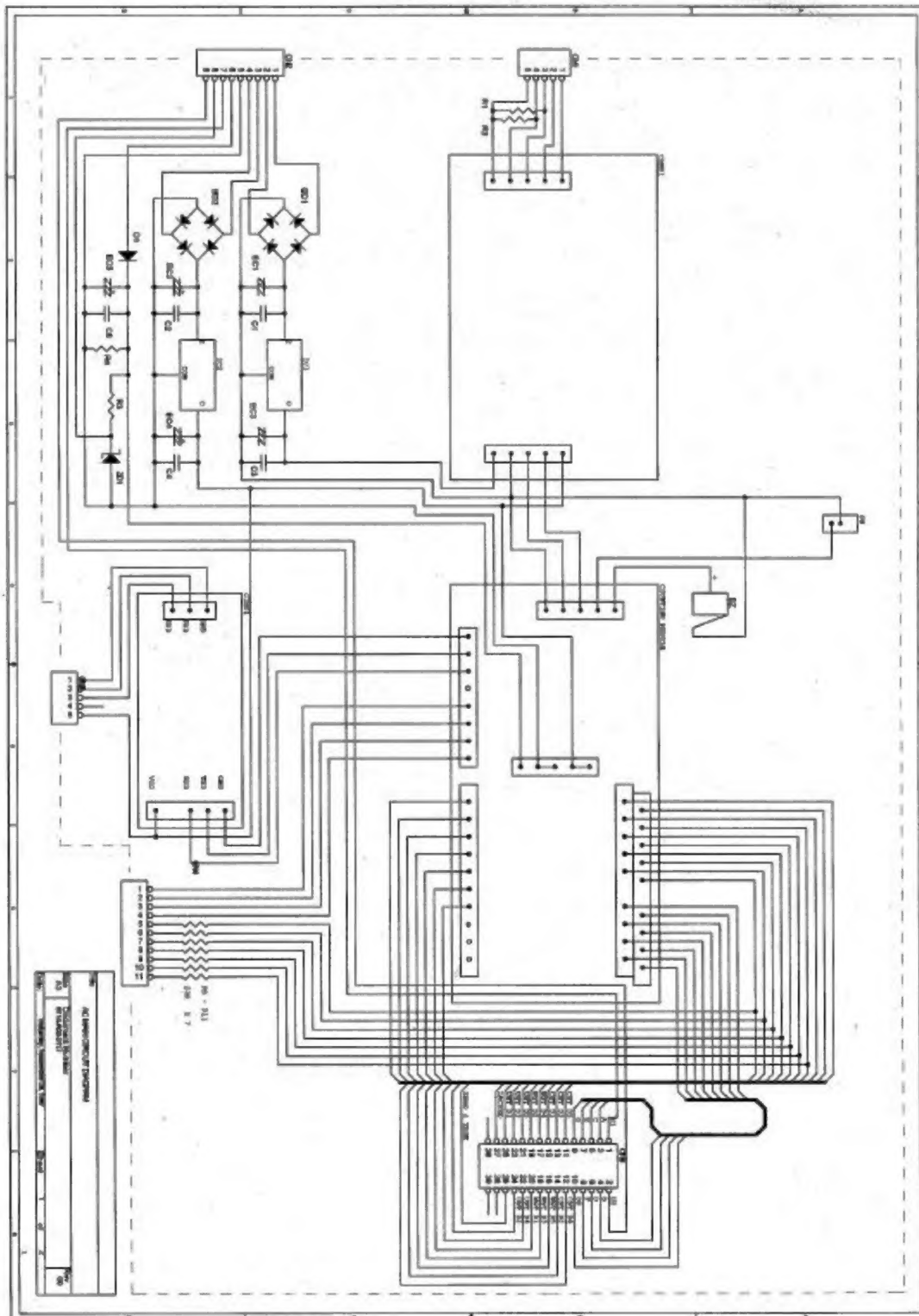
### THE SCHEMATICS

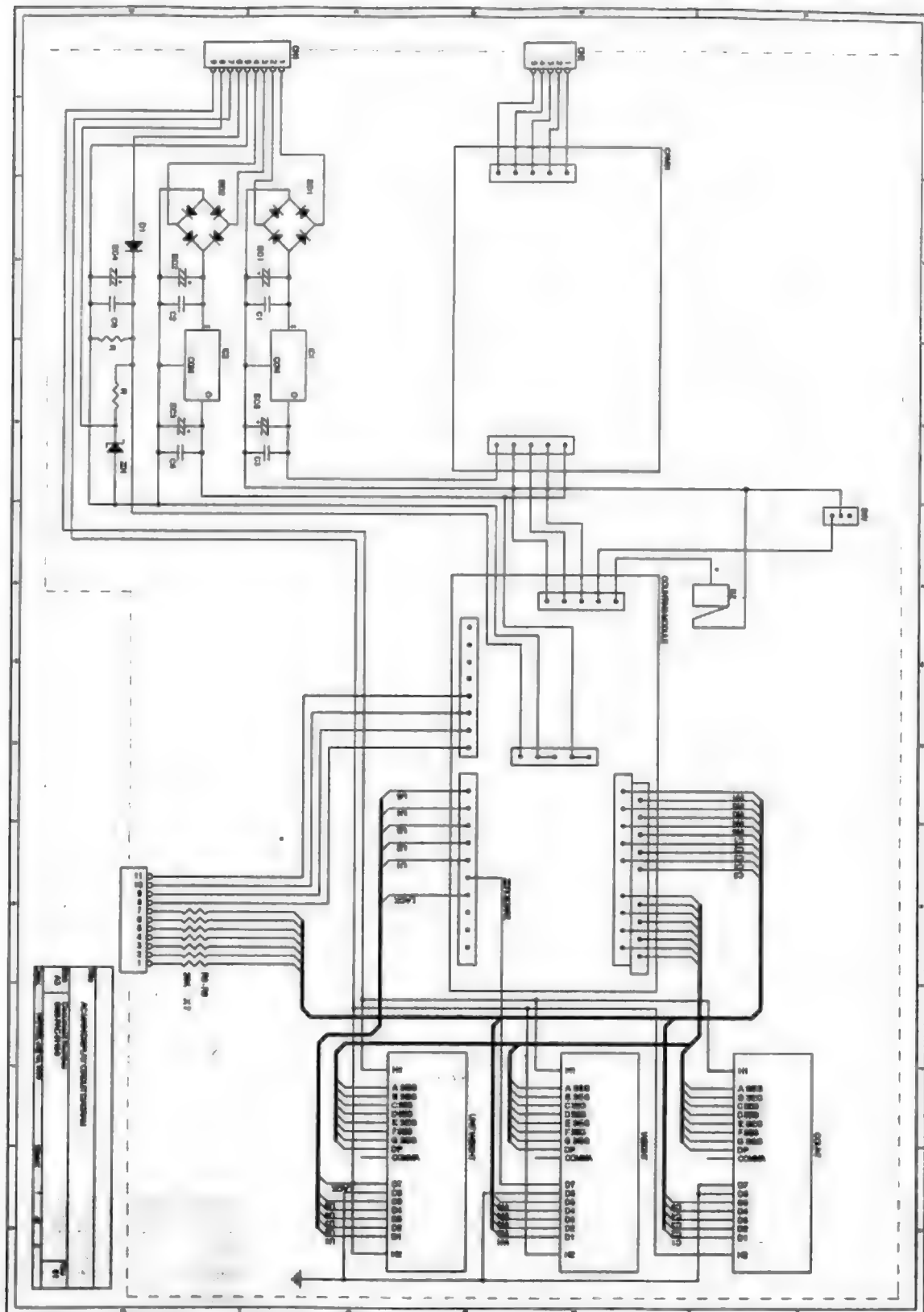
---

A. MAIN CIRCUIT DIAGRAM

REV : 00

REV : 00

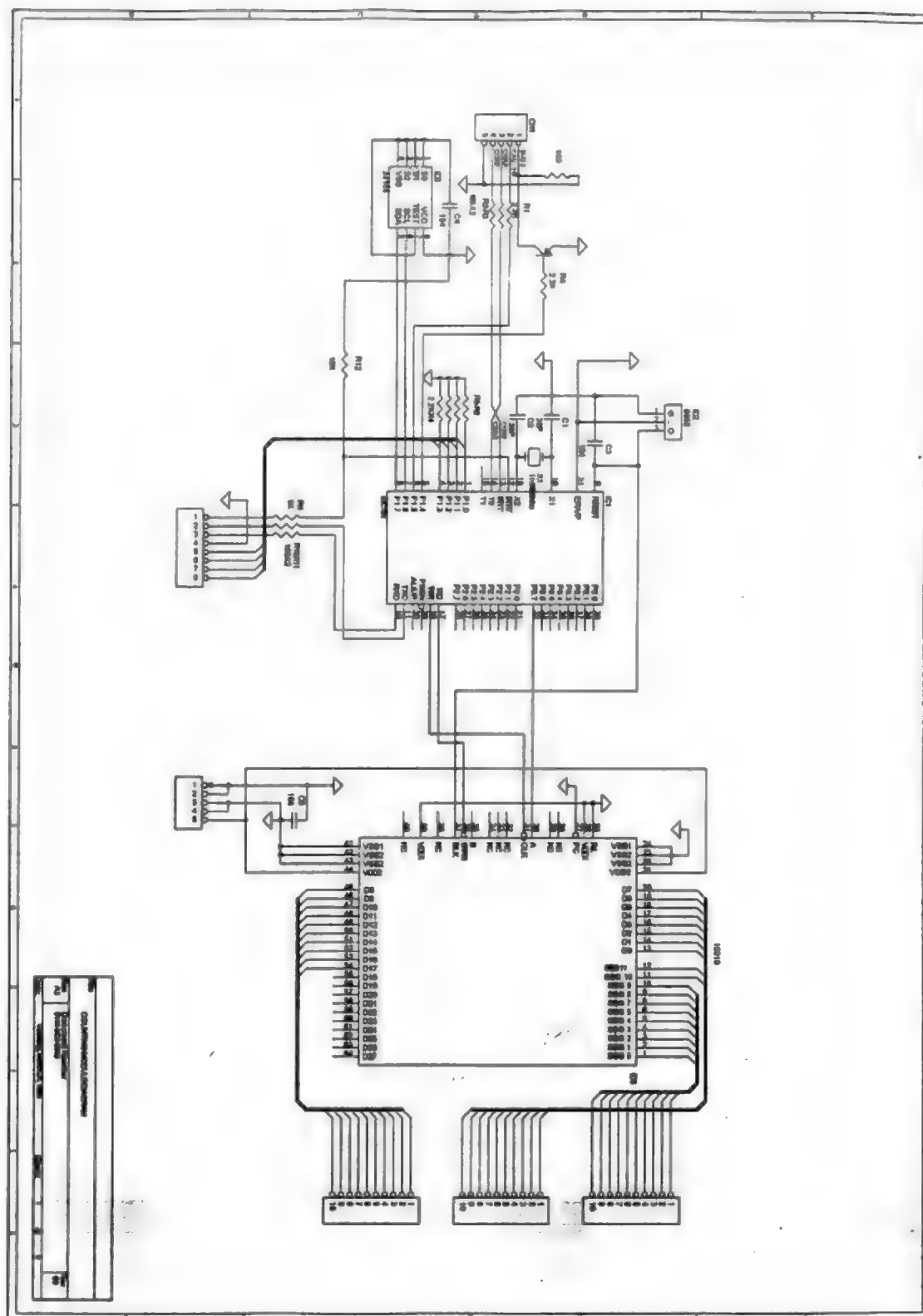






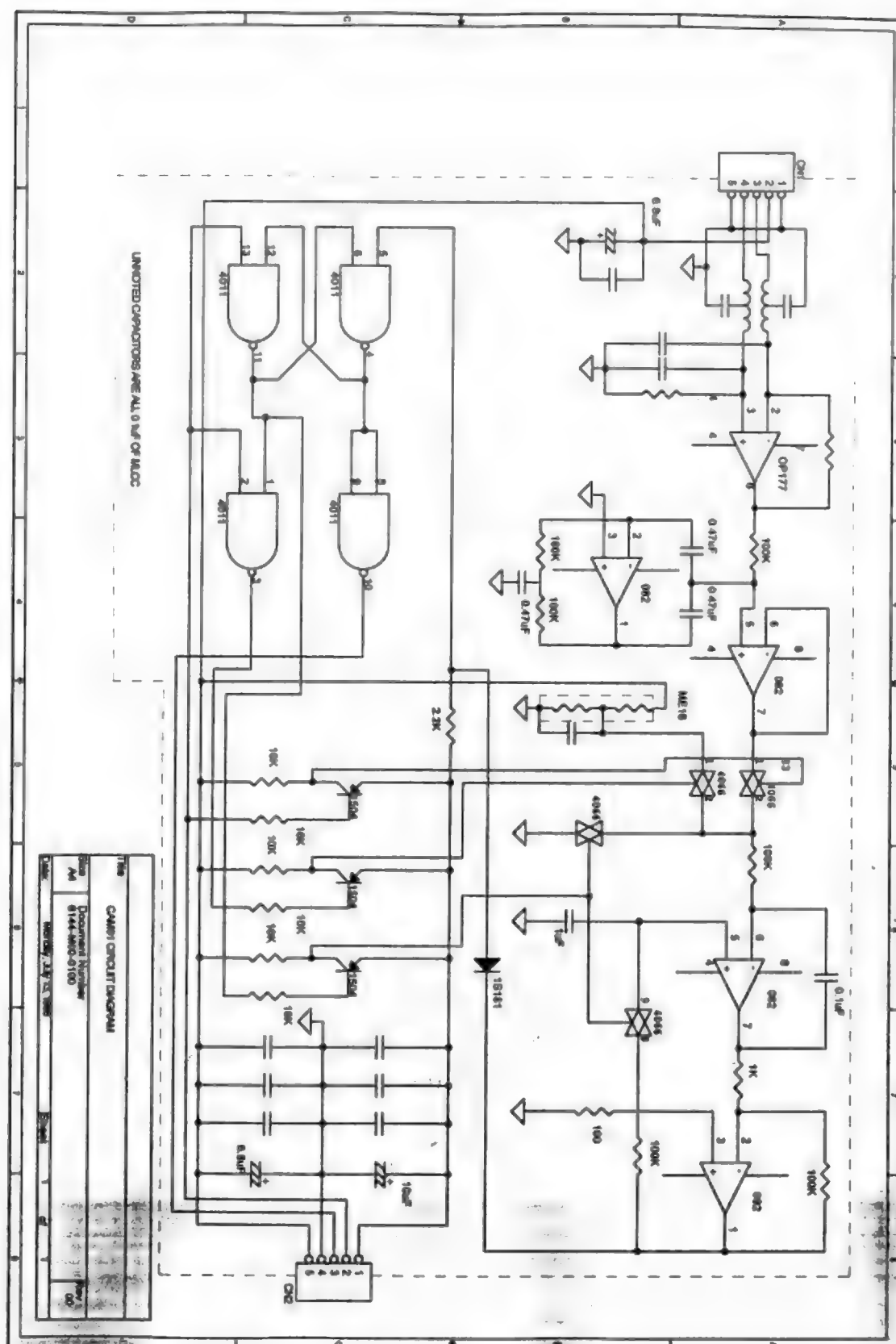
### C. DIGITAL MODULE DIAGRAM

REV : 00



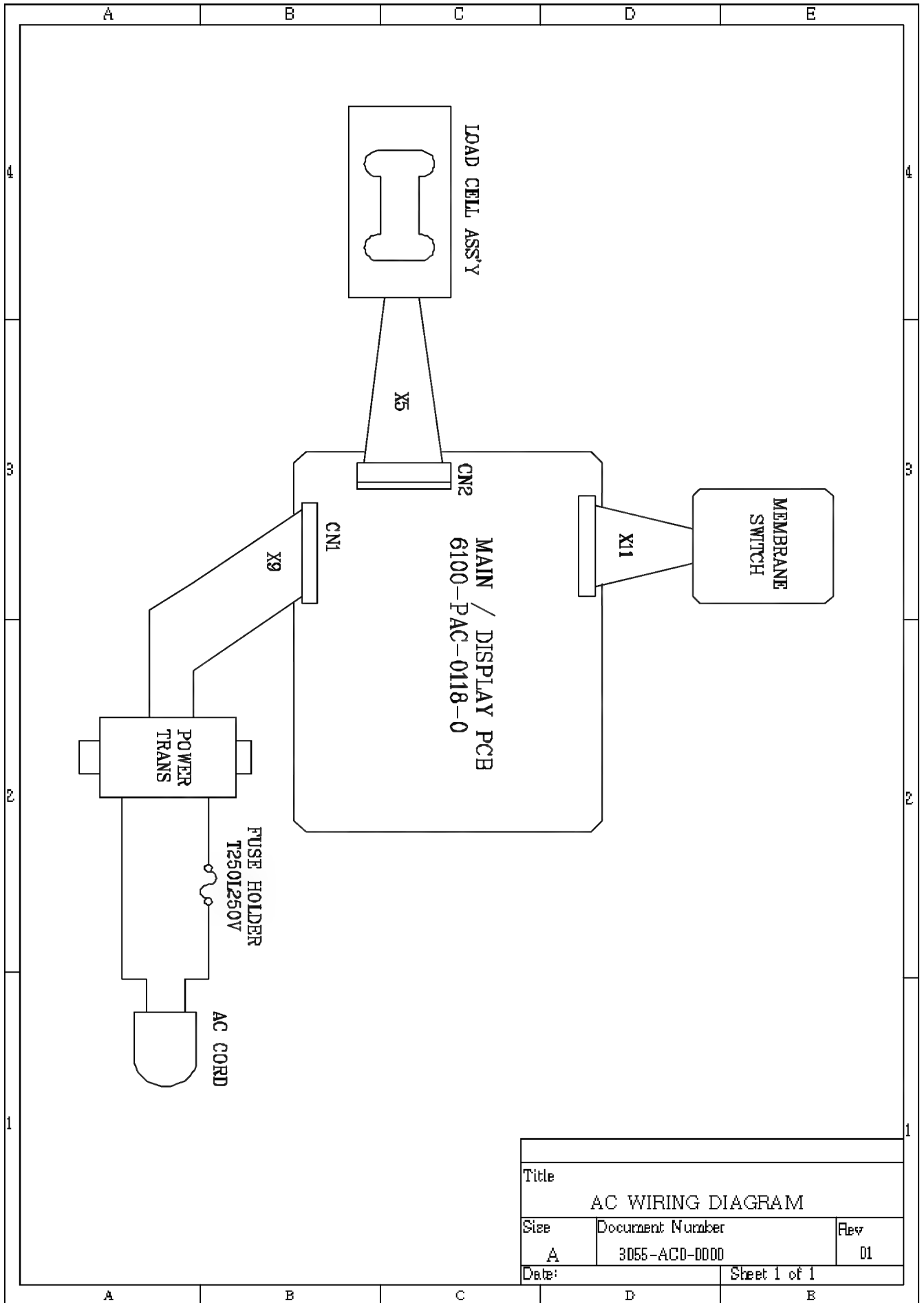
#### D. ANALOG MODULE DIAGRAM

REV : 00



## E. WIRING DIAGRAM

REV : 01

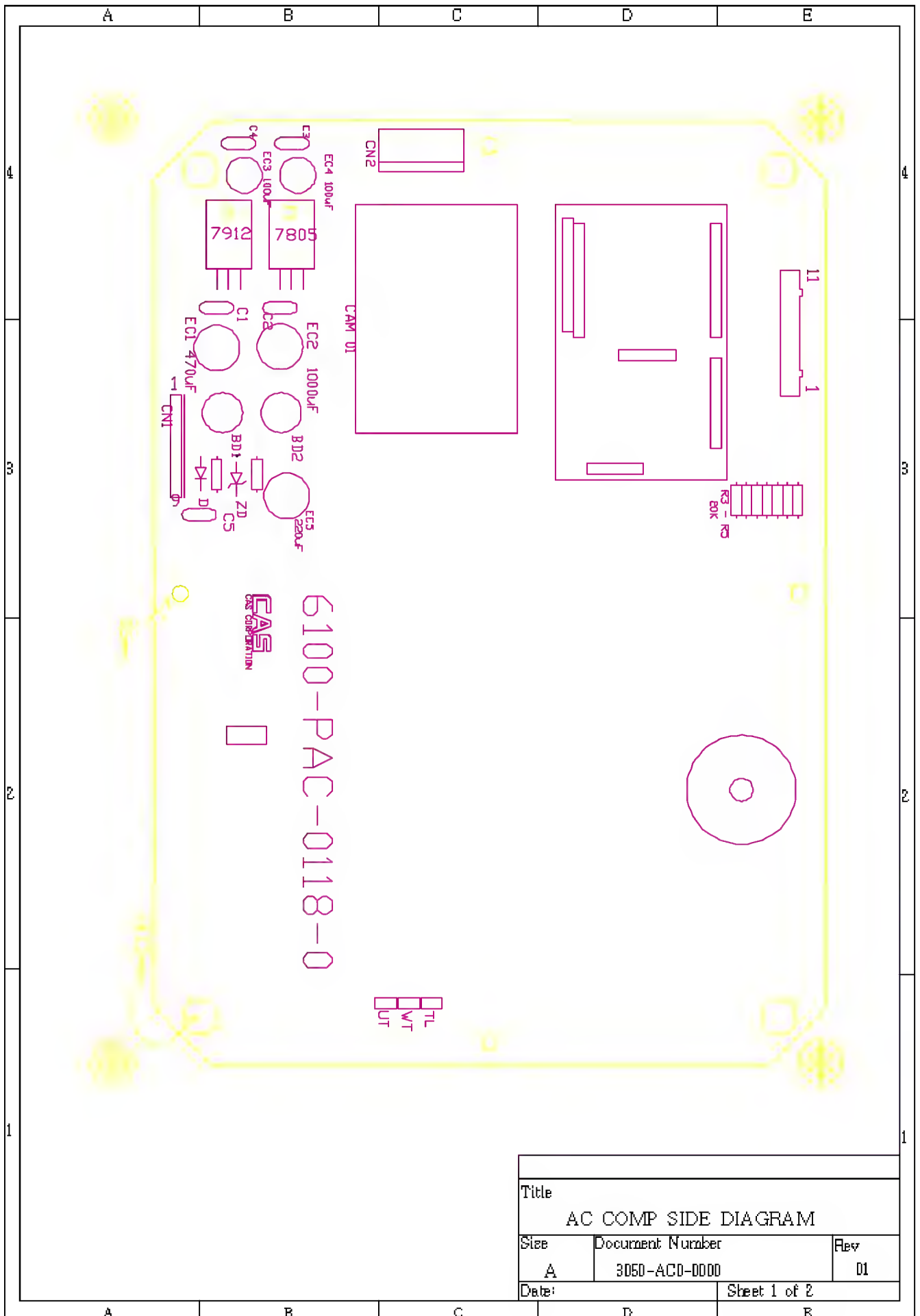


|                   |                 |     |
|-------------------|-----------------|-----|
| Title             |                 |     |
| AC WIRING DIAGRAM |                 |     |
| Size              | Document Number | Rev |
| A                 | 3055-AC0-0000   | 01  |
| Date:             | Sheet 1 of 1    |     |

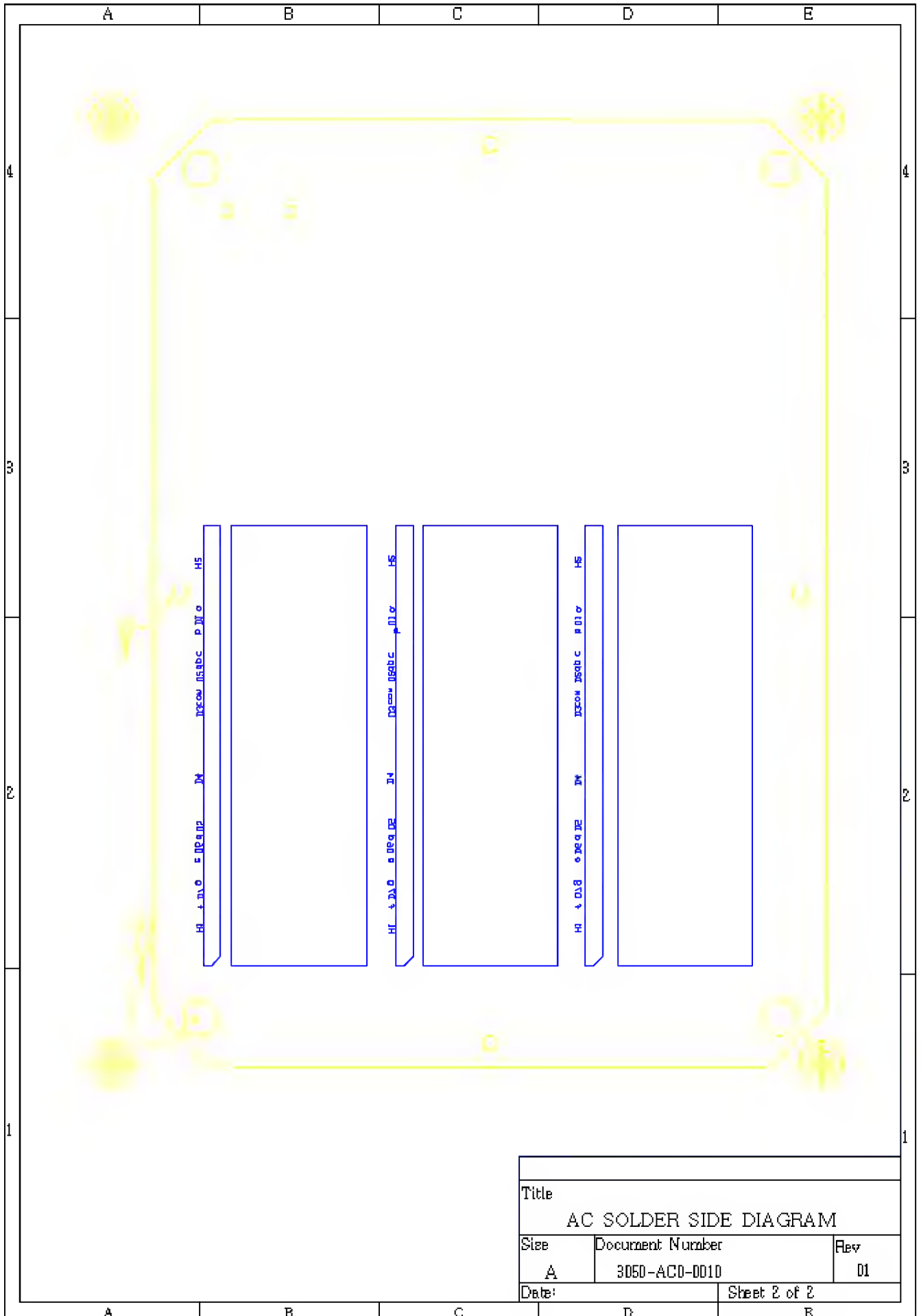


## **F. PARTS LOCATION**

**REV : 01**



|                      |                 |     |
|----------------------|-----------------|-----|
| Title                |                 |     |
| AC COMP SIDE DIAGRAM |                 |     |
| Size                 | Document Number | Rev |
| A                    | 3050-AC0-0000   | 01  |
| Date:                | Sheet 1 of 2    |     |



|                        |                 |     |
|------------------------|-----------------|-----|
| Title                  |                 |     |
| AC SOLDER SIDE DIAGRAM |                 |     |
| Size                   | Document Number | Rev |
| A                      | 3050-AC0-0010   | 01  |
| Date:                  | Sheet 2 of 2    |     |

# CHAPTER-VI

## THE OTHERS

### A. FOR THE SERIAL INTERFACES

#### THE PROTOCOLS FOR THE CAS STANDARD SERIAL INTERFACE

THIS IS HALF-DUPLEX COMMUNICATION RS-232C.

#### A.1 THE COMMUNICATION AGREEMENTS

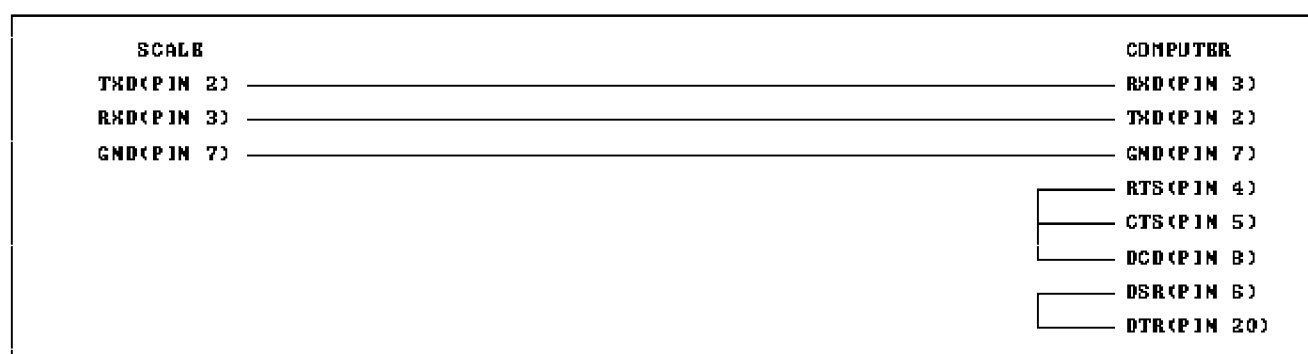
1. BAUD RATE -> 9,600 BPS
2. DATA BIT -> 8 BIT
3. STOP BIT -> 1 BIT
4. PARITY BIT -> NO
5. COMMUNICATION LEVEL -> RS-232C LEVEL
6. DATA FORMAT -> ASCII
7. THE COMMAND DEFINITIONS
  - S-1. "ENQ" -> 05H
  - S-2. "ACK" -> 06H
  - S-3. "NAK" -> 15H
  - S-4. "SOH" -> 01H
  - S-5. "STX" -> 02H
  - S-6. "ETX" -> 03H
  - S-7. "EDT" -> 04H
  - S-8. "DC1" -> 11H
  - S-9. "DC2" -> 12H
  - S-10. "DC3" -> 13H
  - S-11. "DC4" -> 14H

#### A.2 THE WIRE CONNECTIONS

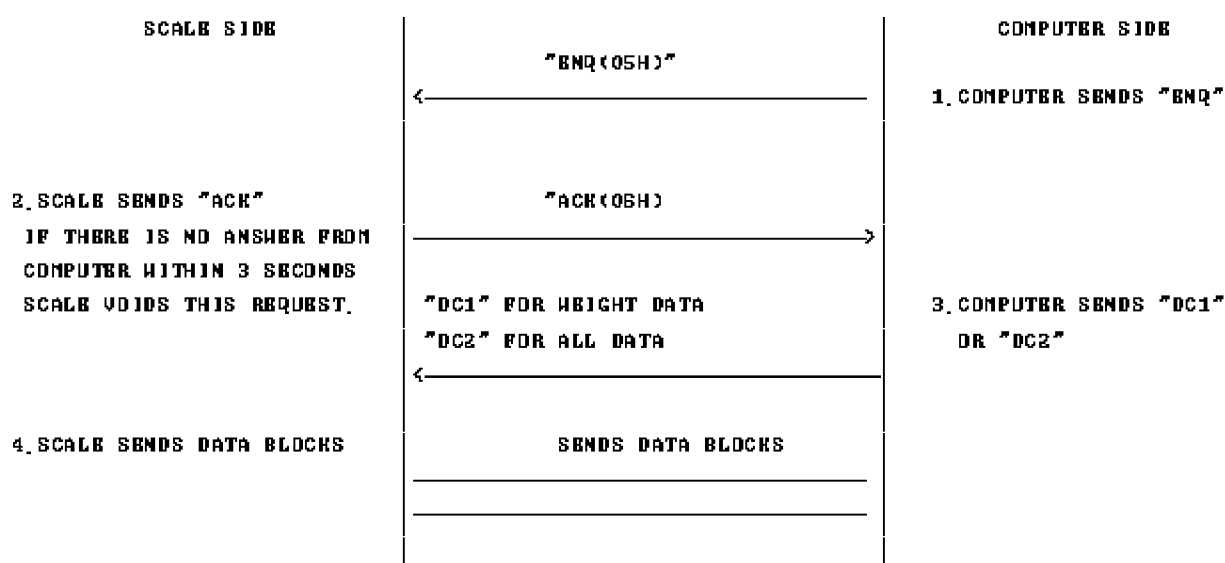
##### A.2.1 THE WIRE CONNECTIONS OF THE D-SUB 9 PIN CONNECTOR OF A COMPUTER SIDE

| SCALE      | COMPUTER   |
|------------|------------|
| TXD(PIN 2) | RXD(PIN 2) |
| RXD(PIN 3) | TXD(PIN 3) |
| GND(PIN 7) | GND(PIN 5) |
|            | RTS(PIN 7) |
|            | CTS(PIN 8) |
|            | DTR(PIN 4) |
|            | DSR(PIN 6) |

## A.2.2 THE WIRE CONNECTIONS OF THE D-SUB 25 PIN CONNECTOR OF A COMPUTER SIDE

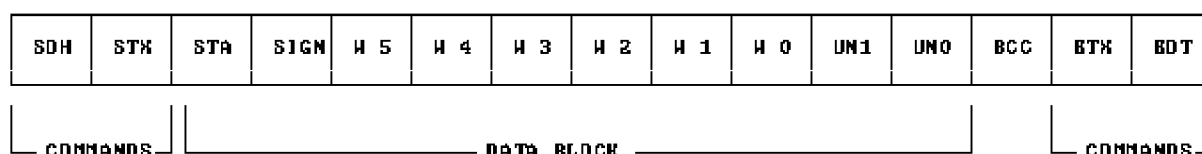


## A.3 THE PROTOCOL



## A.4. THE DATA TRAINS

### 1. THE DATA TRAINS FOR THE "DC1"



### REMARKS ;

- . STA -> A WEIGH STATUS OF THE SCALE  
SCALE IS STABLE -> "S", UNSTABLE -> "U"
- . SIGN -> SIGN OF THE HEIGHT DATA  
ZERO AND POSITIVE HEIGHT -> " " , NEGATIVE HEIGHT -> "- " ,  
OVER LOAD -> "F"
- . H5 THROUGH H0 -> HEIGHT DATA  
BUT ALL "F"s WHEN THE SCALE IS PUT ON OVER LOAD.
- . UN1 THROUGH UN0 -> UNIT OF HEIGHT(kg OR lb)
- . BCC -> BLOCK CHECK CHARACTER  
BCC IS CREATED BY EXCLUSIVE-OR OF A DATA BLOCK

## 2. THE DATA TRAINS FOR THE "DC2"

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SDH | STX | P 7 | P 6 | P 5 | P 4 | P 3 | P 2 | P 1 | P 0 | ETX | BCC |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|     |     |      |     |     |     |     |     |     |     |     |     |     |
|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| STX | STA | SIGN | H 5 | H 4 | H 3 | H 2 | H 1 | H 0 | UN1 | UN0 | BCC | ETX |
|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| STX | P 7 | P 6 | P 5 | P 4 | P 3 | P 2 | P 1 | P 0 | ETX | BCC | SDH |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

### REMARKS ;

.STA -> A WEIGH STATUS OF THE SCALE

SACLE IS STABLE -> "S" , UNSTABLE -> "U"

.SIGN ->SIGNS OF THE HEIGHT DATA

ZERD AND POSITIVE HEIGHT -> " " , NEGATIVE HEIGHT -> "-" ,  
OVER LOAD -> "F"

.P7 THROUGH P0 -> PRICE DATA

IF THE OVER FLOW IS HAPPEN IN PRICE, ALL "F"s WILL FILL TO DATA BLOCK OF THE PRICE.

.H5 THROUGH H0 -> HEIGHT DATA

BUT ALL "F"s WHEN THE SCALE IS PUT ON OVER LOAD.

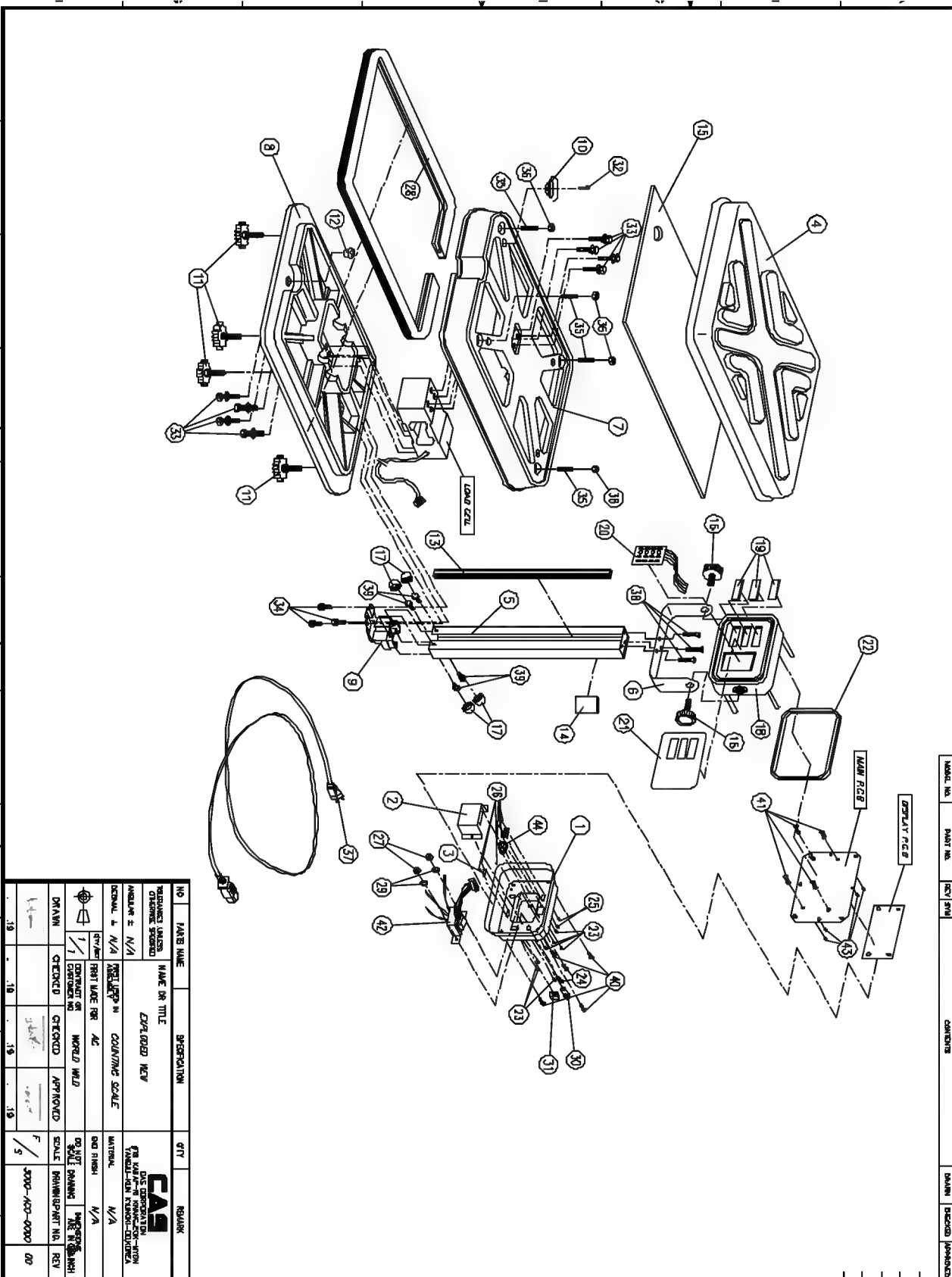
.UN1 THROUGH UN0 -> UNIT OF HEIGHT(kg OR lb)

.BCC -> BLOCK CHECK CHARACTER

BCC IS CREATED BY EXCLUSIVE-OR OF EACH DATA BLOCKS.

B. EXPLODED VIEW (MECHANICAL PART)

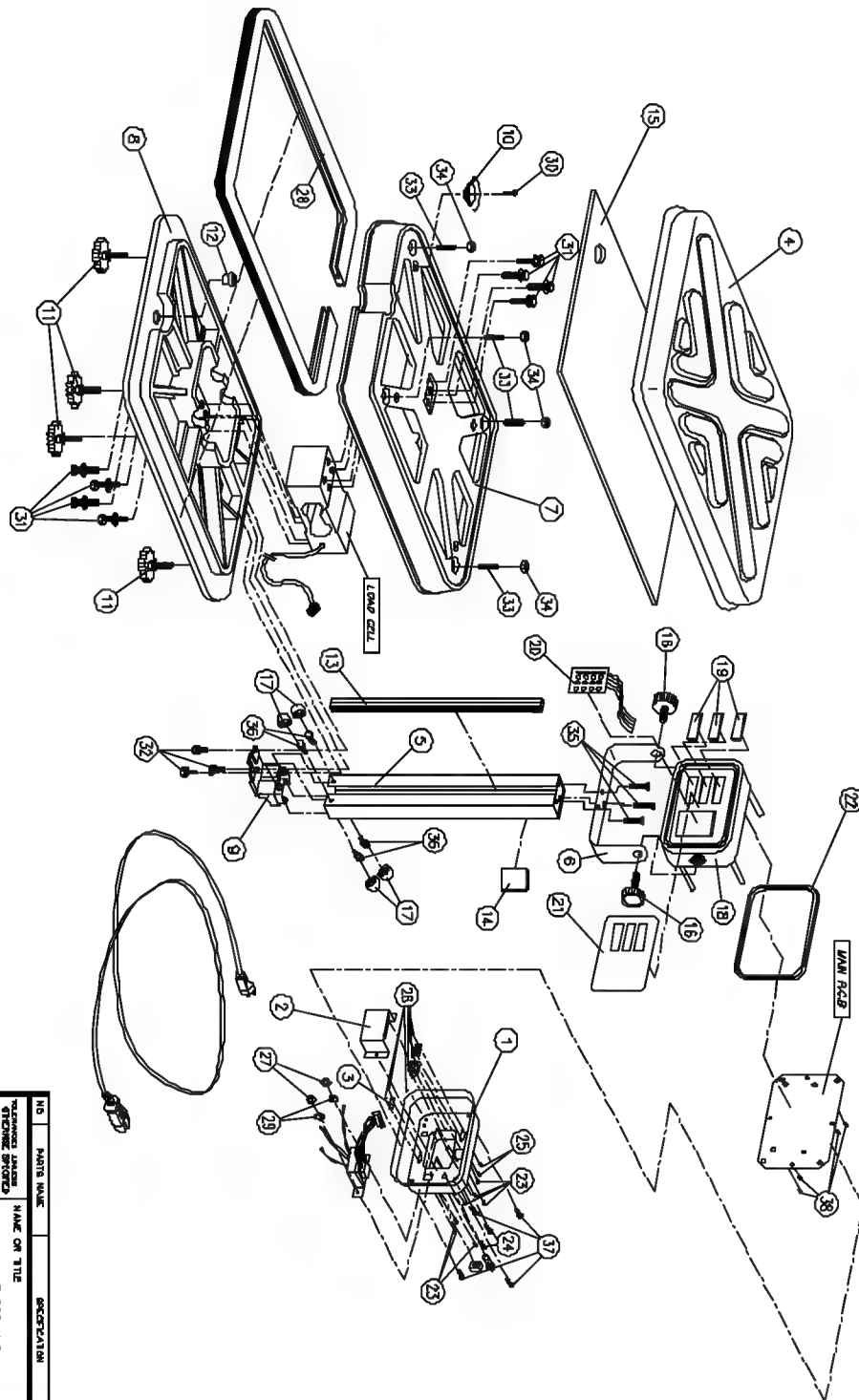
REV : 00



| NO | DATE | NAME | SPECIFICATION | QTY | REMARK |
|----|------|------|---------------|-----|--------|
| 1  |      |      |               |     |        |
| 2  |      |      |               |     |        |
| 3  |      |      |               |     |        |
| 4  |      |      |               |     |        |
| 5  |      |      |               |     |        |
| 6  |      |      |               |     |        |
| 7  |      |      |               |     |        |
| 8  |      |      |               |     |        |
| 9  |      |      |               |     |        |
| 10 |      |      |               |     |        |
| 11 |      |      |               |     |        |
| 12 |      |      |               |     |        |
| 13 |      |      |               |     |        |
| 14 |      |      |               |     |        |
| 15 |      |      |               |     |        |
| 16 |      |      |               |     |        |
| 17 |      |      |               |     |        |
| 18 |      |      |               |     |        |
| 19 |      |      |               |     |        |
| 20 |      |      |               |     |        |
| 21 |      |      |               |     |        |
| 22 |      |      |               |     |        |
| 23 |      |      |               |     |        |
| 24 |      |      |               |     |        |
| 25 |      |      |               |     |        |
| 26 |      |      |               |     |        |
| 27 |      |      |               |     |        |
| 28 |      |      |               |     |        |
| 29 |      |      |               |     |        |
| 30 |      |      |               |     |        |
| 31 |      |      |               |     |        |
| 32 |      |      |               |     |        |
| 33 |      |      |               |     |        |
| 34 |      |      |               |     |        |
| 35 |      |      |               |     |        |
| 36 |      |      |               |     |        |
| 37 |      |      |               |     |        |
| 38 |      |      |               |     |        |
| 39 |      |      |               |     |        |
| 40 |      |      |               |     |        |
| 41 |      |      |               |     |        |
| 42 |      |      |               |     |        |

|          |            |    |     |     |
|----------|------------|----|-----|-----|
| DESIGNED | DATE       | BY | NO. | REV |
| 1        | 10/10/2019 | 1  | 1   | 1   |
| CHECKED  | DATE       | BY | NO. | REV |
| 1        | 10/10/2019 | 1  | 1   | 1   |
| APPROVED | DATE       | BY | NO. | REV |
| 1        | 10/10/2019 | 1  | 1   | 1   |

|     |      |      |               |     |        |
|-----|------|------|---------------|-----|--------|
| NO. | DATE | NAME | SPECIFICATION | QTY | REMARK |
| 1   |      |      |               |     |        |
| 2   |      |      |               |     |        |
| 3   |      |      |               |     |        |
| 4   |      |      |               |     |        |
| 5   |      |      |               |     |        |
| 6   |      |      |               |     |        |
| 7   |      |      |               |     |        |
| 8   |      |      |               |     |        |
| 9   |      |      |               |     |        |
| 10  |      |      |               |     |        |
| 11  |      |      |               |     |        |
| 12  |      |      |               |     |        |
| 13  |      |      |               |     |        |
| 14  |      |      |               |     |        |
| 15  |      |      |               |     |        |
| 16  |      |      |               |     |        |
| 17  |      |      |               |     |        |
| 18  |      |      |               |     |        |
| 19  |      |      |               |     |        |
| 20  |      |      |               |     |        |
| 21  |      |      |               |     |        |
| 22  |      |      |               |     |        |
| 23  |      |      |               |     |        |
| 24  |      |      |               |     |        |
| 25  |      |      |               |     |        |
| 26  |      |      |               |     |        |
| 27  |      |      |               |     |        |
| 28  |      |      |               |     |        |
| 29  |      |      |               |     |        |
| 30  |      |      |               |     |        |
| 31  |      |      |               |     |        |
| 32  |      |      |               |     |        |
| 33  |      |      |               |     |        |
| 34  |      |      |               |     |        |
| 35  |      |      |               |     |        |
| 36  |      |      |               |     |        |
| 37  |      |      |               |     |        |
| 38  |      |      |               |     |        |
| 39  |      |      |               |     |        |
| 40  |      |      |               |     |        |
| 41  |      |      |               |     |        |
| 42  |      |      |               |     |        |



| NO  | PARTS NAME  | DESCRIPTION   | QTY | REMARK |
|-----|-------------|---------------|-----|--------|
| 1   | STEREO UNIT | NAME ON TITLE |     |        |
| 2   | STEREO UNIT | EXPLODED VIEW |     |        |
| 3   | STEREO UNIT | EXPLODED VIEW |     |        |
| 4   | STEREO UNIT | EXPLODED VIEW |     |        |
| 5   | STEREO UNIT | EXPLODED VIEW |     |        |
| 6   | STEREO UNIT | EXPLODED VIEW |     |        |
| 7   | STEREO UNIT | EXPLODED VIEW |     |        |
| 8   | STEREO UNIT | EXPLODED VIEW |     |        |
| 9   | STEREO UNIT | EXPLODED VIEW |     |        |
| 10  | STEREO UNIT | EXPLODED VIEW |     |        |
| 11  | STEREO UNIT | EXPLODED VIEW |     |        |
| 12  | STEREO UNIT | EXPLODED VIEW |     |        |
| 13  | STEREO UNIT | EXPLODED VIEW |     |        |
| 14  | STEREO UNIT | EXPLODED VIEW |     |        |
| 15  | STEREO UNIT | EXPLODED VIEW |     |        |
| 16  | STEREO UNIT | EXPLODED VIEW |     |        |
| 17  | STEREO UNIT | EXPLODED VIEW |     |        |
| 18  | STEREO UNIT | EXPLODED VIEW |     |        |
| 19  | STEREO UNIT | EXPLODED VIEW |     |        |
| 20  | STEREO UNIT | EXPLODED VIEW |     |        |
| 21  | STEREO UNIT | EXPLODED VIEW |     |        |
| 22  | STEREO UNIT | EXPLODED VIEW |     |        |
| 23  | STEREO UNIT | EXPLODED VIEW |     |        |
| 24  | STEREO UNIT | EXPLODED VIEW |     |        |
| 25  | STEREO UNIT | EXPLODED VIEW |     |        |
| 26  | STEREO UNIT | EXPLODED VIEW |     |        |
| 27  | STEREO UNIT | EXPLODED VIEW |     |        |
| 28  | STEREO UNIT | EXPLODED VIEW |     |        |
| 29  | STEREO UNIT | EXPLODED VIEW |     |        |
| 30  | STEREO UNIT | EXPLODED VIEW |     |        |
| 31  | STEREO UNIT | EXPLODED VIEW |     |        |
| 32  | STEREO UNIT | EXPLODED VIEW |     |        |
| 33  | STEREO UNIT | EXPLODED VIEW |     |        |
| 34  | STEREO UNIT | EXPLODED VIEW |     |        |
| 35  | STEREO UNIT | EXPLODED VIEW |     |        |
| 36  | STEREO UNIT | EXPLODED VIEW |     |        |
| 37  | STEREO UNIT | EXPLODED VIEW |     |        |
| 38  | STEREO UNIT | EXPLODED VIEW |     |        |
| 39  | STEREO UNIT | EXPLODED VIEW |     |        |
| 40  | STEREO UNIT | EXPLODED VIEW |     |        |
| 41  | STEREO UNIT | EXPLODED VIEW |     |        |
| 42  | STEREO UNIT | EXPLODED VIEW |     |        |
| 43  | STEREO UNIT | EXPLODED VIEW |     |        |
| 44  | STEREO UNIT | EXPLODED VIEW |     |        |
| 45  | STEREO UNIT | EXPLODED VIEW |     |        |
| 46  | STEREO UNIT | EXPLODED VIEW |     |        |
| 47  | STEREO UNIT | EXPLODED VIEW |     |        |
| 48  | STEREO UNIT | EXPLODED VIEW |     |        |
| 49  | STEREO UNIT | EXPLODED VIEW |     |        |
| 50  | STEREO UNIT | EXPLODED VIEW |     |        |
| 51  | STEREO UNIT | EXPLODED VIEW |     |        |
| 52  | STEREO UNIT | EXPLODED VIEW |     |        |
| 53  | STEREO UNIT | EXPLODED VIEW |     |        |
| 54  | STEREO UNIT | EXPLODED VIEW |     |        |
| 55  | STEREO UNIT | EXPLODED VIEW |     |        |
| 56  | STEREO UNIT | EXPLODED VIEW |     |        |
| 57  | STEREO UNIT | EXPLODED VIEW |     |        |
| 58  | STEREO UNIT | EXPLODED VIEW |     |        |
| 59  | STEREO UNIT | EXPLODED VIEW |     |        |
| 60  | STEREO UNIT | EXPLODED VIEW |     |        |
| 61  | STEREO UNIT | EXPLODED VIEW |     |        |
| 62  | STEREO UNIT | EXPLODED VIEW |     |        |
| 63  | STEREO UNIT | EXPLODED VIEW |     |        |
| 64  | STEREO UNIT | EXPLODED VIEW |     |        |
| 65  | STEREO UNIT | EXPLODED VIEW |     |        |
| 66  | STEREO UNIT | EXPLODED VIEW |     |        |
| 67  | STEREO UNIT | EXPLODED VIEW |     |        |
| 68  | STEREO UNIT | EXPLODED VIEW |     |        |
| 69  | STEREO UNIT | EXPLODED VIEW |     |        |
| 70  | STEREO UNIT | EXPLODED VIEW |     |        |
| 71  | STEREO UNIT | EXPLODED VIEW |     |        |
| 72  | STEREO UNIT | EXPLODED VIEW |     |        |
| 73  | STEREO UNIT | EXPLODED VIEW |     |        |
| 74  | STEREO UNIT | EXPLODED VIEW |     |        |
| 75  | STEREO UNIT | EXPLODED VIEW |     |        |
| 76  | STEREO UNIT | EXPLODED VIEW |     |        |
| 77  | STEREO UNIT | EXPLODED VIEW |     |        |
| 78  | STEREO UNIT | EXPLODED VIEW |     |        |
| 79  | STEREO UNIT | EXPLODED VIEW |     |        |
| 80  | STEREO UNIT | EXPLODED VIEW |     |        |
| 81  | STEREO UNIT | EXPLODED VIEW |     |        |
| 82  | STEREO UNIT | EXPLODED VIEW |     |        |
| 83  | STEREO UNIT | EXPLODED VIEW |     |        |
| 84  | STEREO UNIT | EXPLODED VIEW |     |        |
| 85  | STEREO UNIT | EXPLODED VIEW |     |        |
| 86  | STEREO UNIT | EXPLODED VIEW |     |        |
| 87  | STEREO UNIT | EXPLODED VIEW |     |        |
| 88  | STEREO UNIT | EXPLODED VIEW |     |        |
| 89  | STEREO UNIT | EXPLODED VIEW |     |        |
| 90  | STEREO UNIT | EXPLODED VIEW |     |        |
| 91  | STEREO UNIT | EXPLODED VIEW |     |        |
| 92  | STEREO UNIT | EXPLODED VIEW |     |        |
| 93  | STEREO UNIT | EXPLODED VIEW |     |        |
| 94  | STEREO UNIT | EXPLODED VIEW |     |        |
| 95  | STEREO UNIT | EXPLODED VIEW |     |        |
| 96  | STEREO UNIT | EXPLODED VIEW |     |        |
| 97  | STEREO UNIT | EXPLODED VIEW |     |        |
| 98  | STEREO UNIT | EXPLODED VIEW |     |        |
| 99  | STEREO UNIT | EXPLODED VIEW |     |        |
| 100 | STEREO UNIT | EXPLODED VIEW |     |        |



# C. FULL PARTS LIST

REV : 00

| NO                | MAT'L NEW CODE  | PART NAME          | SPECIFICATION         | UNIT | Q'TY | LOCATION           |
|-------------------|-----------------|--------------------|-----------------------|------|------|--------------------|
| ASS'Y MAIN PCB    |                 |                    |                       |      |      |                    |
| 1                 | 6100-PAC-0117   | MAIN PCB           | 6114-A01-0117         | EA   | 1    |                    |
| 2                 | 1502-A00-0308-0 | MACHINE SCREW (PH) | M3*8                  | EA   | 2    | IC1, IC2           |
| 3                 | 1540-A00-0300-0 | NUT (HEX)          | M3*0.5                | EA   | 2    | IC1, IC2           |
| 4                 | 6220-100-7805-0 | IC (REGULATOR)     | LM7805                | EA   | 1    | IC2                |
| 5                 | 6220-100-7812-0 | IC (REGULATOR)     | LM7812CT              | EA   | 1    | IC1                |
| 6                 | 6280-1BR-0153-0 | BRIDGE-DIODE       | RB-153                | EA   | 2    | BD1, BD2           |
| 7                 | 6281-1P0-4004-0 | POWER-DIODE        | 1N4004                | EA   | 1    | D1                 |
| 8                 | 6282-1ZE-4736-0 | ZENER-DIODE        | 6.2V/1W               | EA   | 1    | ZD1                |
| 9                 | 6515-R0J-0203-0 | RESISTOR 1/4W      | CFR 20K(±5%)          | EA   | 14   | R5-R11             |
| 10                | 6515-R0J-0303-0 | RESISTOR 1/4W      | CFR 30K(±5%)          | EA   | 2    | R3, R4             |
| 11                | 6704-C50-0220-0 | ELECTRIC CONDENSER | 220 $\mu$ F/50V       | EA   | 1    | EC3                |
| 12                | 6704-C25-0470-0 | ELECTRIC CONDENSER | 470 $\mu$ F/25V       | EA   | 1    | EC1                |
| 13                | 6704-C16-1000-0 | ELECTRIC CONDENSER | 1000 $\mu$ F/16V (SG) | EA   | 1    | EC2                |
| 14                | 6704-C16-0100-0 | ELECTRIC CONDENSER | 100 $\mu$ F/16V       | EA   | 2    | EC4, EC5           |
| 15                | 6710-CAP-0104-0 | CERAMIC CONDENSER  | 0.1 $\mu$ F/25V (50V) | EA   | 5    | C1, C2, C3, C4, C6 |
| 16                | 7002-Z00-0050-0 | PIEZO BUZZER       | 20BP-4F (SL11-12PbP)  | EA   | 1    | BZ1                |
| 17                | 7801-CLW-0008-0 | CONNECTOR (WAFER)  | LW 0640-08            | EA   | 1    | CN2                |
| 18                | 7808-CGD-0005-0 | CONNECTOR (WAFER)  | 1143-05 (GOLD)        | EA   | 1    | CN1                |
| 19                | 7807-CFP-0011-0 | FPC CONNECTOR      | FC2254-11S            | EA   | 1    | CN4                |
| 20                | 7810-C00-8284-0 | CONNECTOR          | 828400-40 (MALE)      | EA   | 0.75 | CN3                |
| ASS'Y DISPLAY PCB |                 |                    |                       |      |      |                    |
| 21                | 6110-PAC-0077-0 | DISPLAY PCB        | 6124-A01-0077         | PCS  | 1    |                    |
| 22                | 2631-A00-0001-0 | FIP CUSHION        | EVA 30*20*2t          | EA   | 3    |                    |
| 23                | 7810-C00-8288-0 | CONNECTOR          | 828874-40 (FEMALE)    | EA   | 0.75 |                    |
| 24                | 7204-B00-0708   | FIP & VFD          | CV7DB                 | EA   | 3    |                    |
| LOAD CELL ASS'Y   |                 |                    |                       | EA   | 1    |                    |

| NO                  | MAT'L NEW CODE  | PART NAME           | SPECIFICATION          | UNIT | Q'TY  | LOCATION |
|---------------------|-----------------|---------------------|------------------------|------|-------|----------|
| ASS'Y ANALOG MODULE |                 |                     |                        |      |       |          |
| 25                  | 1050-A00-0008-0 | SHIELD CASE (CAN)   | 60.2*37*18*1t          | EA   | 1     |          |
| 26                  | 1510-A00-0236-0 | TAPPING SCREW-1     | 2.3*B                  | EA   | 1     |          |
| 27                  | 1810-A00-0013-0 | ANALOG PLATE        | 43*14.5(CAN)           | EA   | 1     |          |
| 28                  | 6121-PND-0100-0 | ANALOG PCB          | 6144-A01-0100          | EA   | 1     |          |
| 29                  | 6236-ISO-4011-0 | IC(D-MOS-GATE)      | UPD4011BG              | EA   | 1     |          |
| 30                  | 6236-ISO-4066-0 | IC(ANALOG SW)       | UPD4066BG              | EA   | 1     |          |
| 31                  | 6240-ISO-0177-0 | IC(OP-AMP)          | OP-177GS               | EA   | 1     |          |
| 32                  | 6240-ISO-0040-0 | IC(OP-AMP)          | UPC4072G2              | EA   | 2     |          |
| 33                  | 6281-100-1504-0 | CHIP TRANSISTOR     | ETA1504 SY             | EA   | 3     |          |
| 34                  | 6284-ICP-0181-0 | SWITCHING DIODE     | KDS 181 (SMD)          | EA   | 1     |          |
| 35                  | 6527-R00-0101-0 | CHIP RESISTOR 1/10W | RR1220P-101D(100Ω)     | EA   | 2     |          |
| 36                  | 6527-R00-0222-0 | CHIP RESISTOR 1/10W | RR1220P-222D(2.2K)     | EA   | 1     |          |
| 37                  | 6527-R00-0103-0 | CHIP RESISTOR 1/10W | RR1220P-103(10K)       | EA   | 6     |          |
| 38                  | 6527-R00-4882-0 | CHIP RESISTOR 1/10W | RR1220P-4882D(48.8K)   | EA   | 2     |          |
| 38                  | 6527-R00-0104-0 | CHIP RESISTOR 1/10W | RR1220P-104D(100K)     | EA   | 4     |          |
| 40                  | 6540-RPR-11K5-0 | PRECISION RESISTOR  | FLAY 11K500B           | EA   | 2     |          |
| 41                  | 6550-RM0-0400-0 | NETWORK RESISTOR    | 2B-35-ME16(1K/10K)     | EA   | 1     |          |
| 42                  | 6702-CAP-0106-0 | CHIP TANTAL         | 10NCS 106 MB TER       | EA   | 1     |          |
| 43                  | 6702-CAP-0685-0 | CHIP TANTAL         | 16NCS 685 MB TER       | EA   | 2     |          |
| 44                  | 6800-F00-0220-0 | EMI FILTER          | 220PF(TDK)             | EA   | 2     |          |
| 45                  | 6712-CHP-0104-0 | CHIP CONDENSER      | CL21F 104 MBNC         | EA   | 10    |          |
| 46                  | 6720-CAP-0105-A | POLYESTER CONDENSER | 1 F/63V J RATE BDX     | EA   | 1     |          |
| 47                  | 6720-CAP-0474-0 | POLYESTER CONDENSER | 0.47 μF/63V J RATE BDX | EA   | 3     |          |
| 48                  | 6722-CAP-0474-A | P.P CONDENSER       | 0.47 μF/1600VC/5x/15mm | EA   | 1     |          |
| 48                  | 7810-C00-8284-0 | CONNECTOR           | 828400-40(MALE)        | EA   | 0.275 |          |

| NO                    | MAT'L NEW CODE  | PART NAME           | SPECIFICATION         | UNIT | Q'TY | LOCATION |
|-----------------------|-----------------|---------------------|-----------------------|------|------|----------|
| ASS'Y COUNTING MODULE |                 |                     |                       |      |      |          |
| 50                    | 6101-PCS-0400-0 | COUNTING MODULE PCB | 6144-A01-0400         | BA   | 1    |          |
| 51                    | 6200-ISO-BB52-0 | IC(CPU)             | AT88C52-24QC          | BA   | 1    |          |
| 52                    | 6224-ISO-1631-0 | IC(FIP-DRIVER)      | UPD1630GF-3LB         | BA   | 1    |          |
| 53                    | 6210-ISO-6052-0 | IC (RESET)          | H6052 V1 (SDT223)     | BA   | 1    |          |
| 54                    | 6210-ISO-2416-0 | IC(BEP-RDM)         | X24164S-C7000)        | BA   | 1    |          |
| 55                    | 62B1-100-1504-0 | CHIP TRANSISTOR     | RKTA1504 SY           | BA   | 1    |          |
| 56                    | 6527-R00-0101-0 | CHIP RESISTOR 1/10W | RR1220P-1010(100Ω)    | BA   | 5    |          |
| 57                    | 6527-R00-0102-0 | CHIP RESISTOR 1/10W | RR1220P-1020(1K)      | BA   | 1    |          |
| 58                    | 6527-R00-0222-0 | CHIP RESISTOR 1/10W | RR1220P-2220(2/2K)    | BA   | 6    |          |
| 59                    | 6527-R00-0103-0 | CHIP RESISTOR 1/10W | RR1220P-1030(10K)     | BA   | 1    |          |
| 60                    | 6712-CHP-0104-0 | CHIP CONDENSER      | CL21F 104 NBNC        | BA   | 6    |          |
| 61                    | 7010-ZN0-1105-A | CRYSTAL             | 11.0592 MHz(ATS-4B/U) | BA   | 1    |          |
| 62                    | 7B10-C00-B2B4-0 | CONNECTOR           | B2B400-40(MALE)       | BA   | 1, 2 |          |
| MECHANICAL PARTS      |                 |                     |                       |      |      |          |
| 1                     | 1000-A00-0031-0 | BACK COVER          | 231*171.1*0.8t        | BA   | 1    |          |
| 2                     | 1030-A00-0010-0 | TRANS COVER         | 144*80*26             | BA   | 1    |          |
| 3                     | 1050-A00-0002-0 | SELECT S/H COVER    | 30*13*0.5T            | BA   | 1    |          |
| 4                     | 1000-A00-0001-0 | DUST COVER          | 530*406*54            | BA   | 1    |          |
| 5                     | 1000-A00-0033-0 | SUPPORT             | 1000*50*580*1.0t      | BA   | 1    |          |
| 6                     | 1000-A00-0035-0 | HEAD GUIDE          | 241.5*117*32*2t       | BA   | 1    |          |
| 7                     | 1110-A00-0001-0 | PLATFORM            | 520*385*44            | BA   | 1    |          |
| 8                     | 1110-A00-0004-0 | BODY                | DOLPHIN               | BA   | 1    |          |
| 9                     | 1110-A00-0006-0 | BRACKET             | NEW DOLPHIN           | BA   | 1    |          |
| 10                    | 15B0-A00-001B-0 | GROUND SPRING       | φ0.8*20*20, SUS       | BA   | 1    |          |
| 11                    | 2010-A00-0005-0 | FOOT                | M10*45.5              | BA   | 4    |          |
| 12                    | 2022-A00-0003-0 | ASS'Y W/L GAUGE     | 18*21*14.5(BLACK)     | BA   | 1    |          |
| 13                    | 2020-A00-0001-0 | SUPPORT COVER       | 33*7.2*580            | BA   | 1    |          |
| 14                    | 1B10-A00-0010-0 | SPEC PLATE          | DOLPHIN               | BA   | 1    |          |

| NO | MAT'L NEW CODE  | PART NAME            | SPECIFICATION       | UNIT | Q'TY | LOCATION |
|----|-----------------|----------------------|---------------------|------|------|----------|
| 15 | B304-A00-0013-0 | DUST COVER CUSHION   | 440*470*2t          | EA   | 1    |          |
| 16 | 2001-A00-0055-0 | STOP BOLT            | M8*1.25*28.5(BROWN) | EA   | 2    |          |
| 17 | 2014-A00-0001-0 | HEXAGON BOLT CAP     | φ14*φ18*12.2        | EA   | 4    |          |
| 18 | 2000-A00-0031-0 | HEAD                 | 235*175             | EA   | 1    |          |
| 19 | 2010-A00-0006-0 | DISPLAY COVER        | 88.5*31.5*1t        | EA   | 3    |          |
| 20 | 2100-A00-0033-A | MEMBRANE S/W         | AC TYPE             | EA   | 1    |          |
| 21 | 2200-A00-0081-A | KEY BOARD PAD        | 100AC               | EA   | 1    |          |
| 22 | 2600-A00-0028-0 | BACK RUBBER RING     | 231.6*171           | EA   | 1    |          |
| 23 | 1505-MPN-0308-0 | MACHINE SCREW (TH)   | M3*8                | EA   | 7    |          |
| 24 | 1505-MSU-0410-0 | MACHINE SCREW (TH)   | M4*10-SUS           | EA   | 2    |          |
| 25 | 1507-A00-0307-0 | MACHINE SCREW (CON)  | M3*7                | EA   | 2    |          |
| 26 | 1540-A00-0300-0 | NUT (HEX)            | M3*0.5              | EA   | 7    |          |
| 27 | 1540-A00-0400-0 | NUT (HEX)            | M4*0.7              | EA   | 2    |          |
| 28 | 2600-A00-0001-0 | WASIST BAND          | PVC 15*16.3         | EA   | 1    |          |
| 28 | 1551-A00-0400-0 | WASHER (SPR)         | 4                   | EA   | 2    |          |
| 30 | 7630-S00-0020-A | FUSE HOLDER          | FH-20(φ13)          | EA   | 1    |          |
| 31 | 7600-SDF-0112-0 | ON/OFF SWITCH        | SL112A              | EA   | 1    |          |
| 32 | 1502-A00-0408-0 | MACHINE SCREW (PH)   | M4*8                | EA   | 1    |          |
| 33 | 1521-A00-0825-0 | HEXAGON BOLT (HA)    | M8*25               | EA   | 8    |          |
| 34 | 1521-A00-0827-0 | HEXAGON BOLT (HA)    | M6*27.5             | EA   | 3    |          |
| 35 | 1532-A00-0803-0 | WRENCH BOLT (ST)     | M8*30               | EA   | 4    |          |
| 36 | 1540-A00-0800-0 | NUT (HEX)            | M8*1.25             | EA   | 4    |          |
| 37 | 7560-PAC-0001-0 | POWER CORD           | Y003-A/2            | EA   | 1    |          |
| 38 | 1501-MSU-0510-0 | MACHINE SCREW (PH)   | M5*10 SUS           | EA   | 3    |          |
| 38 | 1521-A00-0612-0 | HEXAGON BOLT (HA)    | M6*12.5             | EA   | 4    |          |
| 40 | 1505-MSU-0412-0 | MACHINE SCREW (TH)   | M4*12 SUS           | EA   | 4    |          |
| 41 | 7702-G00-0012-0 | PCB SUPPDRT          | DABS-12R            | EA   | 4    |          |
| 42 | 7520-PAP-0220-0 | POWER TRANS (4B)     | 220V/50-60Hz        | EA   | 1    |          |
| 43 | 1512-A00-0310-0 | TAPPING SCREW (PH)-2 | M3*10               | EA   | 4    |          |
| 44 | 7612-S00-0003-0 | AC SOCKET CON.       | 3P                  | EA   | 1    |          |

| NO            | MAT'L NEW CODE  | PART NAME           | SPECIFICATION   | UNIT | Q'TY | LOCATION |
|---------------|-----------------|---------------------|-----------------|------|------|----------|
| C/T BOX ASS'Y |                 |                     |                 |      |      |          |
| 45            | B301-A00-0005-0 | HEAD GUIDE POLY BAG | 170*400*0.07t   | BA   | 1    |          |
| 46            | 7620-S00-0160-0 | FUSE                | S504-160mA/250V | BA   | 1    |          |
| 47            | 7613-S00-0002-0 | ADAPTOR PLUG        | 20 (AC)         | BA   | 1    |          |
| 48            | 7640-S00-0604-0 | CORD STOPPER        | SR-BM-4         | BA   | 1    |          |
| 48            | 7660-GND-1500-0 | GROUND TER' ASS'Y   | 1500mm          | BA   | 1    |          |
| 50            | B000-A00-0014-0 | MANUAL              | AC TYPE         | BA   | 1    |          |
| 51            | B020-A00-0033-0 | WARNING STICKER     | AC CORD         | BA   | 1    |          |
| 52            | B300-A00-0001-0 | FUSE POLY BAG       | 50*60*0.05t     | BA   | 1    |          |
| 53            | B303-A00-0004-0 | HEAD POLY BAG       | 350*450*0.05t   | BA   | 1    |          |
| 54            | B308-A00-0002-0 | SET POLY BAG        | 850*800*0.05t   | BA   | 1    |          |
| 55            | B107-AD1-0004-0 | C/T BOX             | 745*510*325     | BA   | 1    |          |
| 56            | B107-AD2-0001-0 | C/T BOX             | 760*525*345     | BA   | 1    |          |
| 57            | B107-AP0-0002-0 | PAD                 | 740*505         | BA   | 1    |          |
| 58            | B400-A00-0040-0 | SILICAGEL           | 10g             | BA   | 1    |          |
| 59            | B207-AS0-0001-0 | STYROPOL BOX A      | 740*146*146     | BA   | 1    |          |
| 60            | B207-AS0-0002-0 | STYROPOL BOX B      | 740*146*146     | BA   | 1    |          |
| 61            | B207-AS0-0003-0 | STYROPOL BOX C      | 740*505*155     | BA   | 1    |          |
| 62            | B301-A00-0003-0 | MANUAL POLY BAG     | 170*250*0.05t   | BA   | 1    |          |

| NO                   | MAT'L NEW CODE  | PART NAME          | SPECIFICATION        | UNIT | Q'TY | LOCATION           |
|----------------------|-----------------|--------------------|----------------------|------|------|--------------------|
| < ELECTRICAL PARTS > |                 |                    |                      |      |      |                    |
| ASS'Y MAIN PCB       |                 |                    |                      |      |      |                    |
| 1                    | 6100-PAC-011B-0 | MAIN PCB           | 6100-PAC-011B-0      | EA   | 1    |                    |
| 2                    | 6220-100-7B05-0 | IC(REGULATOR)      | LM7805               | EA   | 1    | IC2                |
| 3                    | 6220-100-7B12-0 | IC(REGULATOR)      | LM7812CT             | EA   | 1    | IC1                |
| 4                    | 62B0-1BR-0153-0 | BRIDGE-DIODE       | RB-153               | EA   | 2    | BD1, BD2           |
| 5                    | 62B1-1P0-4004-0 | POWER-DIODE        | 1N4004               | EA   | 1    | D1                 |
| 6                    | 62B2-1ZE-4736-0 | ZENER-DIODE        | 5.1V/1W              | EA   | 1    | ZD1                |
| 7                    | 6515-R0J-0203-0 | RESISTOR 1/4W      | CFR 20K( $\pm 5\%$ ) | EA   | 14   | R3-R8              |
| 8                    | 6515-R0J-0303-0 | RESISTOR 1/4W      | CFR 30K( $\pm 5\%$ ) | EA   | 2    | R                  |
| 9                    | 6704-C50-0220-0 | ELECTRIC CONDENSER | 220 $\mu$ F/50V      | EA   | 1    | EC5                |
| 10                   | 6704-C25-0470-0 | ELECTRIC CONDENSER | 470 $\mu$ F/25V      | EA   | 1    | EC1                |
| 11                   | 6704-C16-1000-0 | ELECTRIC CONDENSER | 1000 $\mu$ F/16V(SC) | EA   | 1    | EC2                |
| 12                   | 6704-C16-0100-0 | ELECTRIC CONDENSER | 100 $\mu$ F/16V      | EA   | 2    | EC3, EC4           |
| 13                   | 6710-CAP-0104-0 | CERAMIC CONDENSER  | 0.1 $\mu$ F/25V(50V) | EA   | 5    | C1, C2, C3, C4, C5 |
| 14                   | 7002-Z00-0050-0 | PIEZO BUZZER       | 20BP-4F(SL11-12F&P)  | EA   | 1    | BZ1                |
| 15                   | 7B01-CLW-0008-0 | CONNECTOR (WAFER)  | LW 0540-08           | EA   | 1    | CN1                |
| 16                   | 7B08-CGD-0005-0 | CONNECTOR (WAFER)  | 1143-05(GOLD)        | EA   | 1    | CN2                |
| 17                   | 7B07-CFP-0011-0 | FPC CONNECTOR      | FC2254-11S           | EA   | 1    | CN                 |
| 18                   | 7204-B00-0708-0 | FIP & VFD          | CV7DB                | EA   | 3    |                    |
| LOAD CELL ASS'Y      |                 |                    |                      | EA   | 1    |                    |

| NO                  | MAT'L NEW CODE  | PART NAME           | SPECIFICATION           | UNIT | Q'TY  | LOCATION |
|---------------------|-----------------|---------------------|-------------------------|------|-------|----------|
| ASS'Y ANALOG MODULE |                 |                     |                         |      |       |          |
| 19                  | 6121-PMD-0100-0 | ANALOG PCB          | 6121-PMD-0100-0         | BA   | 1     |          |
| 20                  | 6236-ISO-4011-0 | IC(D-NDS-GATE)      | UPD4011BG               | BA   | 1     |          |
| 21                  | 6236-ISO-4066-0 | IC(ANALOG SH)       | UPD4066BG               | BA   | 1     |          |
| 22                  | 6240-ISO-0177-0 | IC(OP-AMP)          | OP-177GS                | BA   | 1     |          |
| 23                  | 6240-ISO-0040-0 | IC(OP-AMP)          | UPC4072G2               | BA   | 2     |          |
| 24                  | 62B1-100-1504-0 | CHIP TRANSISTOR     | KT41504 SY              | BA   | 3     |          |
| 25                  | 62B4-ICP-0181-0 | SWITCHING DIODE     | KDS 181 (SMD)           | BA   | 1     |          |
| 26                  | 6527-R00-0101-0 | CHIP RESISTOR 1/10W | RR1220P-1010(100Ω)      | BA   | 2     |          |
| 27                  | 6527-R00-0222-0 | CHIP RESISTOR 1/10W | RR1220P-2220(2.2K)      | BA   | 1     |          |
| 28                  | 6527-R00-0103-0 | CHIP RESISTOR 1/10W | RR1220P-103(10K)        | BA   | 6     |          |
| 28                  | 6527-R00-4882-0 | CHIP RESISTOR 1/10W | RR1220P-48820(48.8K)    | BA   | 2     |          |
| 30                  | 6527-R00-0104-0 | CHIP RESISTOR 1/10W | RR1220P-1040(100K)      | BA   | 4     |          |
| 31                  | 6540-RPR-11K5-0 | PRECISION RESISTOR  | FLAY 11K500B            | BA   | 2     |          |
| 32                  | 6550-RN0-0400-0 | NETWORK RESISTOR    | 2B-35-ME15(1K/10K)      | BA   | 1     |          |
| 33                  | 6702-CAP-0106-0 | CHIP TANTAL         | 10NCS 106 MB TER        | BA   | 1     |          |
| 34                  | 6702-CAP-0685-0 | CHIP TANTAL         | 16NCS 685 MB TER        | BA   | 2     |          |
| 35                  | 6800-F00-0220-0 | EMI FILTER          | 220PF(TDK)              | BA   | 2     |          |
| 36                  | 6712-CHP-0104-0 | CHIP CONDENSER      | CL21F 104 MBMC          | BA   | 10    |          |
| 37                  | 6720-CAP-0105-A | POLYESTER CONDENSER | 1 F/63V J RATE BOM      | BA   | 1     |          |
| 38                  | 6720-CAP-0474-0 | POLYESTER CONDENSER | 0.47 μF/63V J RATE BOM  | BA   | 3     |          |
| 38                  | 6722-CAP-0474-A | P.P CONDENSER       | 0.47 μF/1600VC/5% /15mm | BA   | 1     |          |
| 40                  | 7B10-C00-B2B4-0 | CONNECTOR           | B2B400-40(MALE)         | BA   | 0.275 |          |

| NO                    | MAT'L NEW CODE  | PART NAME           | SPECIFICATION         | UNIT | Q'TY | LOCATION |
|-----------------------|-----------------|---------------------|-----------------------|------|------|----------|
| ASS'Y COUNTING MODULE |                 |                     |                       |      |      |          |
| 41                    | 6101-PCS-0400-0 | COUNTING MODULE PCB | 6144-A01-0400         | BA   | 1    |          |
| 42                    | 6200-ISO-B052-0 | IC(CPU)             | AT88C52-24QC          | BA   | 1    |          |
| 43                    | 6224-ISO-1631-0 | IC(FIP-DRIVER)      | UPD1630GF-3LB         | BA   | 1    |          |
| 44                    | 6210-ISO-B052-0 | IC (RESET)          | H6052 V1 (SDT223)     | BA   | 1    |          |
| 45                    | 6210-ISO-2416-0 | IC(BEP-RDM)         | X24164S-C7000)        | BA   | 1    |          |
| 46                    | 62B1-100-1504-0 | CHIP TRANSISTOR     | RKTA1504 SY           | BA   | 1    |          |
| 47                    | 6527-R00-0101-0 | CHIP RESISTOR 1/10W | RR1220P-1010(100Ω)    | BA   | 5    |          |
| 48                    | 6527-R00-0102-0 | CHIP RESISTOR 1/10W | RR1220P-1020(1K)      | BA   | 1    |          |
| 49                    | 6527-R00-0222-0 | CHIP RESISTOR 1/10W | RR1220P-2220(2/2K)    | BA   | 6    |          |
| 50                    | 6527-R00-0103-0 | CHIP RESISTOR 1/10W | RR1220P-1030(10K)     | BA   | 1    |          |
| 51                    | 6712-CHP-0104-0 | CHIP CONDENSER      | CL21F 104 NBNC        | BA   | 6    |          |
| 52                    | 7010-ZN0-1105-A | CRYSTAL             | 11.0592 MHz(ATS-4B/U) | BA   | 1    |          |
| 53                    | 7810-C00-B294-0 | CONNECTOR           | B2B400-40(MALE)       | BA   | 1, 2 |          |
| CIRCUIT BODY ASS'Y    |                 |                     |                       |      |      |          |
| 54                    | 7630-S00-0020-A | FUSE HOLDER         | FH-20 (φ13)           | BA   | 1    |          |
| 55                    | 7600-S0F-0112-0 | ON/OFF SWITCH       | SL112A                | BA   | 1    |          |
| 56                    | 7560-PAC-0001-0 | POWER CORD          | Y003-A/Z              | BA   | 1    |          |
| 57                    | 7702-G00-0012-0 | PCB SUPPRT          | DABS-12R              | BA   | 4    |          |
| 58                    | 7520-PAP-0220-0 | POWER TRANS(4B)     | 220V/50-60Hz          | BA   | 1    |          |
| 59                    | 7612-S00-0003-0 | AC SOCKET CON.      | 3P                    |      |      |          |
| CIRCUIT C/T BDX ASS'Y |                 |                     |                       |      |      |          |
| 60                    | 7613-S00-0002-0 | ADAPTOR PLUG        | 20(AC)                | BA   | 1    |          |
| 61                    | 7640-S00-0604-0 | CORD STOPPER        | SR-6M-4               | BA   | 1    |          |
| 62                    | 7860-GND-1500-0 | GROUND TER' ASS'Y   | 1500mm                | BA   | 1    |          |



| NO                   | MAT'L NEW CODE  | PART NAME            | SPECIFICATION       | UNIT | Q'TY | LOCATION |
|----------------------|-----------------|----------------------|---------------------|------|------|----------|
| < MECHANICAL PARTS > |                 |                      |                     |      |      |          |
| ASS'Y BODY           |                 |                      |                     |      |      |          |
| 1                    | 2010-A00-0005-0 | FOOT                 | M10*45.5            | EA   | 4    |          |
| 2                    | 2022-A00-0003-0 | ASS'Y W/L GAUGE      | 18*21*14.5(BLACK)   | EA   | 1    |          |
| 3                    | 1000-A00-0001-0 | DUST COVER           | 530*406*54          | EA   | 1    |          |
| 4                    | 1110-A00-0001-0 | PLATFROM             | 520*385*44          | EA   | 1    |          |
| 5                    | 1110-A00-0004-0 | BODY                 | DOLPHIN             | EA   | 1    |          |
| 6                    | 1580-A00-0018-0 | GROUND SPRING        | 0.8*20*20, SUS      | EA   | 1    |          |
| 7                    | B304-A00-0013-0 | DUST COVER CUSHION   | 440*470*2t          | EA   | 1    |          |
| 8                    | 2600-A00-0001-0 | WAIST BAND           | PVC 15*16.3         | EA   | 1    |          |
| 9                    | 1502-A00-0408-0 | MACHINE SCREW (PH)   | M4*8                | EA   | 1    |          |
| 10                   | 1521-A00-0825-0 | HEXAGON BOLT (HA)    | M8*25               | EA   | 8    |          |
| 11                   | 1532-A00-0830-A | WRENCH BOLT (ST)     | M8*30-SUS, NUT      | EA   | 4    |          |
| ASS'Y SUPPORT        |                 |                      |                     |      |      |          |
| 12                   | 1524-MS0-0627-0 | HEXAGON BOLT (FLH)   | M6*27-SUS           | EA   | 3    |          |
| 13                   | 1110-A00-0006-0 | BRACKET              | NEW DOLPHIN         | EA   | 1    |          |
| 14                   | 1524-MSU-0608-0 | HEXAGON BOLT (FLH)   | M6*8.5              | EA   | 4    |          |
| 15                   | 2014-A00-0001-0 | HEXAGON BOLT CAP     | 14*18*12.2          | EA   | 4    |          |
| 16                   | 1000-A00-0033-0 | SUPPORT              | 1000*50*580*1.0t    | EA   | 1    |          |
| 17                   | 2020-A00-0001-0 | SUPPORT COVER        | 33*7.2*580          | EA   | 1    |          |
| 18                   | 1810-A00-0010-0 | SPEC PLATE           | DOLPHIN             | EA   | 1    |          |
| ASS'Y HEAD           |                 |                      |                     |      |      |          |
| 19                   | 1000-A00-0035-0 | HEAD GUIDE           | 241.5*117*32*2t     | EA   | 1    |          |
| 20                   | 1501-MSU-0510-0 | MACHINE SCREW (FH)   | M5*10 SUS           | EA   | 3    |          |
| 21                   | 2001-A00-0055-0 | STOP BOLT            | M8*1.25*28.5(BROWN) | EA   | 2    |          |
| 22                   | 2000-A00-0031-0 | HEAD                 | 235*175             | EA   | 1    |          |
| 23                   | 2010-A00-0006-0 | DISPLAY COVER        | 88.5*31.5*1t        | EA   | 3    |          |
| 24                   | 2100-A00-0033-0 | MEMBRANE S/H         | AC TYPE             | EA   | 1    |          |
| 25                   | 2200-A00-0081-0 | KEY BOARD PAD        | 100AC               | EA   | 1    |          |
| 26                   | 2600-A00-0028-0 | BACK RUBBER RING     | 231.6*171           | EA   | 1    |          |
| 27                   | 1505-NPM-0308-0 | MACHINE SCREW (TH)   | M3*8                | EA   | 7    |          |
| 28                   | 1505-MSU-0410-0 | MACHINE SCREW (TH)   | M4*10-SUS           | EA   | 2    |          |
| 29                   | 1507-A00-0307-0 | MACHINE SCREW (CON)  | M3*7                | EA   | 2    |          |
| 30                   | 1540-A00-0300-0 | NUT (HEX)            | M3*0.5              | EA   | 7    |          |
| 31                   | 1540-A00-0400-0 | NUT (HEX)            | M4*0.7              | EA   | 2    |          |
| 32                   | 1551-A00-0400-0 | WASHER (SPR)         | 4                   | EA   | 2    |          |
| 33                   | 1505-MSU-0412-0 | MACHINE SCREW (TH)   | M4*12 SUS           | EA   | 4    |          |
| 34                   | 1512-A00-0310-0 | TAPPING SCREW (PH)-2 | M3*10               | EA   | 4    |          |
| 35                   | 1000-A00-0031-A | BACK COVER           | 231*171.1*0.8t      | EA   | 1    |          |
| 36                   | 1030-A00-0010-0 | TRANS COVER          | 144*80*26           | EA   | 1    |          |
| 37                   | 1050-A00-0002-0 | SELECT S/H COVER     | 30*13*0.5T          | EA   | 1    |          |

| NO               | MAT'L NEW CODE  | PART NAME            | SPECIFICATION    | UNIT | Q'TY | LOCATION |
|------------------|-----------------|----------------------|------------------|------|------|----------|
| ASS'Y MAIN PCB   |                 |                      |                  |      |      |          |
| 1                | 1502-A00-0308-0 | MACHINE SCREW (PH)   | M3*8             | EA   | 2    | IC1, IC2 |
| 2                | 1540-A00-0300-0 | NUT (HEX)            | M3*0.5           | EA   | 2    | IC1, IC2 |
| 3                | 1030-A00-0048-0 | CAL S/W BRACKET      | AP               | EA   | 1    |          |
| ASS'Y ANALOG PCB |                 |                      |                  |      |      |          |
| 1                | 1050-A00-0008-0 | SHIELD CASE (CAN)    | AL 60.2*37*18*1t | EA   | 1    |          |
| 2                | 1510-A00-0236-0 | TAPPING SCREW (PH)-1 | 2.3*6            | EA   | 1    |          |
| 3                | 1810-A00-0013-0 | ANALOG PLATE         | 43*14.5(CAN)     | EA   | 1    |          |
| ASS'Y C/T BOX    |                 |                      |                  |      |      |          |
| 1                | B301-A00-0005-0 | HEAD GUIDE POLY BAG  | 170*400*0.07t    | EA   | 1    |          |
| 2                | B000-A00-0014-0 | MANUAL               | AC TYPE          | EA   | 1    |          |
| 3                | B020-A00-0033-0 | WARNING STICKER      | AC CORD          | EA   | 1    |          |
| 4                | B300-A00-0001-0 | FUSE POLY BAG        | 50*60*0.05t      | EA   | 1    |          |
| 5                | B303-A00-0004-0 | HEAD POLY BAG        | 350*450*0.05t    | EA   | 1    |          |
| 6                | B308-A00-0002-0 | SET POLY BAG         | 850*800*0.05t    | EA   | 1    |          |
| 7                | B107-AD1-0004-0 | C/T BOX              | 745*510*325      | EA   | 1    |          |
| 8                | B107-AD2-0001-0 | C/T BOX              | 760*525*345      | EA   | 1    |          |
| 9                | B107-AP0-0002-0 | PAD                  | 740*505          | EA   | 1    |          |
| 10               | B400-A00-0040-0 | SILICAGEL            | 10g              | EA   | 1    |          |
| 11               | B207-AS0-0001-0 | STYROPOL BOX A       | 740*146*146      | EA   | 1    |          |
| 12               | B207-AS0-0002-0 | STYROPOL BOX B       | 740*146*146      | EA   | 1    |          |
| 13               | B207-AS0-0003-0 | STYROPOL BOX C       | 740*505*155      | EA   | 1    |          |
| 14               | B301-A00-0003-0 | MANUAL POLY BAG      | 170*250*0.05t    | EA   | 1    |          |

---

## APPENDIX

### DEVICE SPECIFICATION

---

CPU ..... 80C52/80C32

MOS INTEGRATED CIRCUIT .....  $\mu$ PD16310

RESET I. C ..... H6052

EEPROM ..... AT24C164